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Timothy M. Hogan (004567)
ARIZONA CENTER FOR LAW
IN THE PUBLIC INTEREST
202 E. McDowell Rd., Ste. 153
Phoenix, Arizona 85004
(602) 258-8850
thogan@aclpi.org



Attorneys for Sierra Club – Grand Canyon Chapter

BEFORE THE ARIZONA POWER PLANT AND TRANSMISSION LINE SITING COMMITTEE

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|---|---|
| In the matter of the Application of Southern California Edison Company and its assignees in conformance with the requirements of Arizona Revised Statutes Sections 40-360.03 and 40-360.06 for a certificate of environmental compatibility authorizing construction of a 500k alternating current transmission line and related facilities in Maricopa and La Paz Counties in Arizona originating at the Harquahala Switchyard west of Phoenix, Arizona and terminating at the Devers Substation in Riverside County, California. | Case No. L-00000A-06-0295-00130<br><br>**REQUEST TO SUPPLEMENT RECORD** |



The Sierra Club - Grand Canyon Chapter requests that the record in this matter be supplemented with the final Compatibility Determination issued by the United States Fish and Wildlife Service during the week of March 5, 2007 after the record in this matter was closed. A copy of the Compatibility Determination and an attachment to it as well as a statement issued by the USFWS regarding the determination are attached. The Determination, attachment and statement can also be found at the Kofa National Wildlife Refuge website, http://www.fws.gov/southwest/refuges/arizona/kofa.html. The Sierra Club requests that official

notice be taken of the Compatibility Determination as an official record of a governmental agency.

RESPECTFULLY SUBMITTED this 14th day of March, 2007.

ARIZONA CENTER FOR LAW IN THE PUBLIC INTEREST

By _____
Timothy M. Hogan
202 E. McDowell Rd., Suite 153
Phoenix, Arizona 85004
Attorneys for the Sierra Club - Grand Canyon Chapter

ORIGINAL and 25 COPIES of the foregoing filed this 14th day of March, 2007, with:

Docket Control – Utilities Division
Arizona Corporation Commission
1200 W. Washington
Phoenix, AZ 85007

Copies served electronically this 14th day of March, 2007, to:

All Parties of Record

_____

United States Department of the Interior
FISH AND WILDLIFE SERVICE
KOFA NATIONAL WILDLIFE REFUGE

# COMPATIBILITY DETERMINATION

**Proposal:** Southern California Edison is requesting a new right-of-way to construct the Devers Palo Verde #2 (DPV #2) 500 kilovolt (kV) electric transmission line through approximately 24 miles of Kofa National Wildlife Refuge. Southern California Edison applied for a new public utility Right-of-Way permit from the Fish and Wildlife Service in November 2005.

**Compatibility Determination Decision:** The Refuge Manager evaluated the impacts of the proposal as described in the applicant's 2006 Administrative Final Environmental Impact Report/Environmental Impact Statement to determine if the proposed use would be compatible with the purposes of the Refuge and the mission of the National Wildlife Refuge System. Using sound professional judgment, the Refuge Manager finds that the proposed use will materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission and purposes of the Kofa National Wildlife Refuge.

**Signature:** Refuge Manager _____ 3/1/07
(Signature and Date)

**Concurrence:** Regional Chief _____ 3-5-07
(Signature and Date)

**Mandatory 10- or 15-year Re-Evaluation Date:** None

United States Department of the Interior

FISH AND WILDLIFE SERVICE

KOFA NATIONAL WILDLIFE REFUGE
356 W. 1st Street
Yuma, AZ 85364
Ph: (928) 783-7861
Fax: (928) 783-8611

# COMPATIBILITY DETERMINATION

*The National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997, 16 U.S.C. 668dd-668ee, states that "The Secretary is authorized, under regulations as [s]he may prescribe, to- (A) permit the use of any area within the [National Wildlife Refuge] System for any purpose, including but not limited to hunting, fishing, public recreation and accommodation, and access whenever [s]he determines that such uses are compatible" and that "...the Secretary shall not initiate or permit a new use of a refuge or expand, renew or extend an existing use of refuge, unless the Secretary has determined that the use is a compatible use and that the use is not inconsistent with public safety." A compatible use is defined as "A proposed or existing wildlife-dependent recreational use or any other use of a national wildlife refuge that, based on sound professional judgment, will not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the national wildlife refuge." The compatibility determination is to be a written determination signed and dated by the Refuge Manager and Regional Chief, signifying that the proposed or existing use of a national wildlife refuge is a compatible use or an incompatible use.*

*Applicable compatibility regulations in 50 CFR Parts 25, 26, and 29 were published in the Federal Register on October 18, 2000 (Volume 65, No. 202, pp. 62458 – 62483).*

**Use:** Southern California Edison-Devers Palo Verde #2, 500 kV Electric Transmission Line

**Refuge Name:** Kofa National Wildlife Refuge

**Establishing and Acquisition Authorities:**

1. Executive Order 8039; January 25, 1939.
2. Public Law 94-223, an amendment to the National Wildlife Refuge System Administration Act of 1966; [16 U.S.C. 668dd (a)(2); 90 STAT. 199]; February 27, 1976.
3. Public Law 101-628; [104 STAT. 4469]; Arizona Desert Wilderness Act, Title III - Designation of Wilderness Areas to be Administered by the United States Fish and Wildlife Service; November 28, 1990.

**Refuge Purpose(s):**
"...set apart for the conservation and development of natural wildlife resources, and for the protection of public grazing lands and natural forage resources. [Executive Order 8039]

"...consolidating the authorities relating to the various categories of areas that are administered by the Secretary of Interior for the conservation of fish and wildlife, including...game ranges....are hereby designated as the National Wildlife Refuge System,...and shall be administered by the Secretary through the United States Fish and Wildlife Service. [National Wildlife Refuge System Administration Act of 1966, as amended]

"...certain lands in the Kofa National Wildlife Refuge, Arizona, which comprise approximately 510,900 acres and certain other public lands comprising 5,300 acres which are hereby added to and incorporated within such refuge (and which shall be managed accordingly)...areas designated under this title shall be administered...in accordance with the Wilderness Act...." [Arizona Desert Wilderness Act of 1990]

**National Wildlife Refuge System Mission:**
The mission of the System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

**Description of Use:**
Southern California Edison (SCE) proposes to construct a new 230-mile, 500 kilovolt (kV) electric transmission line, Devers Palo Verde #2 (DPV #2), between Devers Substation in California and Harquahala Generating Substation in Arizona (near Palo Verde Nuclear Power Plant), and to upgrade 48.2 miles of 230 kV transmission line in California. The proposed route would pass through approximately 24 miles of Kofa National Wildlife Refuge (Refuge) (MP E53.3–MP E77.6), identified by SCE as the Refuge Segment. It would be installed adjacent to the existing 500kV electric transmission line, Devers Palo Verde #1 (DPV #1), constructed in 1981. Approximately 378 acres of Refuge lands would be included within the 24-mile Refuge Segment (130 feet wide x 126,720 feet long divided by 43,560 sq/ft per acre = 378 acres). The proposed electric transmission line is not within an existing Right-of-Way (ROW); therefore, a public utility ROW permit would be needed to authorize the use on Refuge lands. The project has been certified by the Fish and Wildlife Service (Service) to be outside the Refuge's designated wilderness. The use is not considered an emergency, nor is it considered a priority use for the Refuge or the National Wildlife Refuge System.

As proposed, there would be a total of 85, four-legged lattice towers installed within the 24-mile corridor on the Refuge during the construction of DPV #2. The proposed 130-foot wide ROW is designed to accommodate the new tower structures while providing adequate distance between the new towers and DPV #1 to prevent arcing. The ROW is sited to avoid direct construction impacts to adjacent wilderness. As stated above, a ROW for the proposed use does not exist and would

have to be issued prior to installation of these structures. The towers would be approximately 96 feet wide at the top, 40 feet wide at the bottom, and 150 feet tall. Each tower would be accessed via extension of existing spur roads that currently provide access to DPV #1. On average, spur road extensions would be approximately 14 feet wide and 130 feet long. One complete new spur road would be constructed. Initially spur roads would be graded, but would then be maintained in an unimproved status into the long term, except when maintenance to towers or conductors was required. The foot-print of each tower on the ground would vary, depending upon the location of the tower and the terrain in which it is installed. Approximately 100 acres of Refuge lands along the 24-mile transmission line corridor would be directly impacted by construction of the towers, requiring short-term use of heavy equipment such as cranes, drill rigs, dozers, excavators, compressors, generators, and trucks. Helicopters would also be needed to transport construction materials and to string the conductors for the overhead lines between towers. Construction would be initiated in May 2008 and completed in December 2008.

SCE's stated purposes for the Proposed Project are fourfold: 1) increase California's transmission import capability; 2) enhance the competitive energy market; 3) support the energy market in the Southwest; and, 4) provide increased reliability, insurance value, and operating flexibility. DPV #2 is being sited on the Refuge because of the existing 500 kV electric transmission line (DPV #1) and associated access roads and spur roads to this line. This alignment would avoid creation of a second major transmission corridor through the region.

SCE filed an application for the proposed DPV #2 in 1985. After being rejected numerous times by the Service as incompatible, the use was approved by the Regional Director in his 1989 compatibility determination (CD). Based on a review of the 1989 CD, it has been determined that this CD is no longer valid. The National Wildlife Refuge Administration Act of 1966 authorizes the Service to use an existing CD; however, the Service will re-evaluate CDs for all existing uses other than wildlife-dependent uses when conditions under which the use is permitted change significantly or if there is significant new information regarding the effects of the use (50 CFR §25.21). In addition, the Service can terminate or modify an existing use when the Service determines that such a use is not compatible. "A refuge manager always may re-evaluate the compatibility of a use at any time" (65 Fed. Reg. 62484, §2.11(H)).

The re-evaluation of the 1989 DPV #2 CD was prompted by several procedural and policy factors. Prior to the issuance of the 1989 CD, the Service's administrative record shows that the issue of compatibility was addressed numerous times; on nine occasions Service personnel either determined that DPV #2 was incompatible with Refuge purposes or reaffirmed this position. This evidence significantly undermines the scant justification provided in the 1989 CD by the Regional Director that the installation of DPV #2 was compatible with the mission of the Refuge. Previously, a similar set of findings occurred with the CD for DPV #1. On five occasions, Service personnel either determined that DPV #1 was incompatible with Refuge purposes or reaffirmed this position, with the Service Director making the final compatibility finding in 1979. The Service's compatibility policy developed pursuant to the National Wildlife Refuge System Improvement Act of 1997 became effective on November 17, 2000 (65 Fed. Reg. 62484, 603 FW 2), and sets up the current process for determining whether or not a use of a national wildlife refuge is a compatible use and requires that CDs for non-wildlife dependent

uses be re-evaluated every 10 years. Proposed uses are now evaluated in context with other new Service policies: Biological Integrity, Diversity and Environmental Health (601 FW 3); NWRS Mission, Goals, and Refuge Purposes (601 FW 1); Wildlife Dependent Recreation (605 FW 1); and, Appropriate Refuge Uses (603 FW 1). The proposed use is also assessed for compliance to the Refuge's overall management strategy as addressed in the 1996 Kofa National Wildlife Refuge and Wilderness and New Waters Mountains Wilderness Interagency Management Plan and Environmental Assessment, and specifically in regards to Objective 2 - Wildlife and Habitat Management, and Objective 3 - Recreation, Legal Access, and Public Information.

**Availability of Resources:**
The Service has executed a reimbursable agreement with SCE to cover all salary costs allocated to the project during the review and permitting process, as well as the planning and construction phases of the project, if the project is approved by the agency. However, it is important to note that a considerable amount of time would be allocated by staff in attending meetings and monitoring construction during calendar year 2008. These activities would take time away from work on other priority activities and projects. Work to be affected would include wildlife habitat improvement projects, biological inventory and monitoring activities, ongoing research projects, and critical administrative duties at the Refuge. It is estimated that the Refuge Manager and Assistant Refuge Manager will spend approximately 40 hours each on the project over the 8-month period. It is estimated that the Refuge's Wildlife Biologist will spend over 256 hours (8-hours per week) on the project during the same period.

To reduce the potential problems such as speeding, wilderness trespass, illegal collection, or damage of resources during construction, additional law enforcement resources would need to be allocated to the project. This includes approximately 320 hours of law enforcement staff time at a cost of $12,074 and additional fuel and vehicle costs of $3,200, based on patrolling 10 hours per week over the 8-month construction period. These costs are not covered in the existing reimbursable agreement and may have to be covered by the Refuge. The above estimates do not include the additional commitment of law enforcement resources to monitor illegal public access on improved spur roads to the 85 new tower sites within the 24-mile transmission line corridor. This will be an increased annual cost and time commitment covered by the Refuge for the life of the project (at least 50 years).

All on-the-ground work to construct DPV #2 will be handled by SCE or their contractors at no cost to the Service. In addition, SCE will be hiring biological monitors and other outside professional staff to implement the mitigation measures outlined for the project. The cost of these additional staff will also be the responsibility of SCE.

**Anticipated Impacts of the Use:**

I. *Summary of impacts identified in the 2006 Final Environmental Impact Report/Environmental Impact Statement (FEIR/EIS) for the Refuge Segment (Aspen Environmental Group 2006). The FEIR/EIS can be reviewed at the California Public Utilities Commission (CPUC) site: http://www.cpuc.ca.gov/environment/info/aspen/dpv2/toc-feir.htm.*

Vegetation and Soils There are 5 woody species and 8 cacti species that are protected under the Arizona Native Plant Law that would be impacted by the project on the Refuge. No Federal or State listed plant species occur on the Refuge. The Proposed Project would result in the removal of existing vegetation and disturbance of surface soils within the ROW. In addition, permanent loss of habitat would occur where new tower or pole foundations are installed and where access and spur roads are constructed. Long-term surface disturbance could occur during construction, operation, and maintenance of the Proposed Project. The most common type of surface disturbance is associated with rubber-tired or steel-tracked vehicles used to string/pull the line and transport personnel and materials along the project ROW. Potential impacts include soil compaction and crushing of vegetation. These potential impacts may also occur during transportation of construction/maintenance vehicles and equipment within the transmission line ROW. Impact B-6 (construction activities would result in indirect or direct loss of native plants) acknowledges that impacts to native plants are potentially significant (Class II). As proposed, this impact would be mitigated to less than significant with implementation of Mitigation Measure B-6a. Applicant Proposed Measures (APMs) have also been proposed to further reduce impacts to these resources. These include APMs B-3, B-8, B-9, B-12, and B-13. Refer to the CPUC website for more detailed description of mitigation measures and APMs.

Non-Native Invasive Species Introduction of non-native plant species would occur primarily during construction, but would also continue to occur during operation and maintenance phases of the Proposed Project. The introduction of non-native or noxious weeds would be related to the use of vehicles, construction equipment, earthen materials contaminated with non-native plant seed, use of straw bales or mattes that contain seeds of non-native plant species, and enhanced public access to the project corridor during and after construction. Vehicles parking along access roads that contain populations of noxious weeds can also result in the introduction of these species into areas not previously infested. Impact B-2 (construction activities would result in the introduction of invasive non-native or noxious plant species) acknowledges that the introduction of non-native invasive plant species would be a potentially significant impact (Class II). Mitigation Measure B-1a and B-2a have been proposed to reduce the impact to a less than significant level. Mitigation measure B-2b was further modified in an attempt to reduce impacts based on Service comments on the Draft EIR/EIS (August 2006). Refer to the CPUC website for more detailed description of mitigation measures and APMs.

Wildlife Impacts to State listed and sensitive wildlife and plant species, such as desert tortoise and desert bighorn sheep, may occur as a result of removal of habitat and direct mortality resulting from construction and operational activities. Species such as the common chuckwalla, banded Gila monster, and desert rosy boa would have a high potential to be impacted by construction activities in this segment. While common chuckwalla has not been recorded in the vicinity of the Proposed Project, an occurrence of banded Gila monster was recorded in the Livingston Hills within 3 miles of the proposed ROW and the desert rosy boa was recorded in the western Kofa Mountains within 5 miles of the ROW. Suitable habitat for these species could occur in the Proposed Project area. Impact B-9 (construction activities would result in indirect or direct loss of individual species or direct loss of habitat for sensitive species) acknowledges that the impacts

to reptiles in Arizona are significant (Class II). Mitigation Measures B-9b, B-9c and B-9d have been proposed to reduce these impacts to a less than significant level. Refer to the CPUC website for more detailed description of mitigation measures and APMs.

Suitable habitat for the western burrowing owl also occurs within this segment. The Proposed Project would cause direct and indirect impacts on this sensitive bird species through permanent and temporary loss of suitable habitat and the disturbance of nesting activities. Project construction could displace or result in the mortality of burrowing owls. Impact B-9 (construction activities would result in indirect or direct loss of individual species or direct loss of habitat for sensitive species) acknowledges that the impacts to burrowing owls are potentially significant (Class II), but implementation of Mitigation Measure B-9e, and B-5a have been proposed to reduce these impacts. Mitigation Measure B-5a is also proposed to reduce impacts to other sensitive birds to a less than significant level. Refer to the CPUC website for more detailed description of mitigation measures and APMs.

Due to the proximity of desert bighorn sheep lambing areas within the Refuge, impacts to the sheep during breeding and lambing periods would be potentially significant (Class II). Disturbances associated with construction may result in reduced reproductive success or mortality of young desert bighorn sheep as a result of abandonment. Impacts B-9 (construction activities would result in indirect or direct loss of individual species or direct loss of habitat for sensitive species) and B-11 (construction activities would result in adverse effects to movement of fish, wildlife movement corridors, or native wildlife nursery sites) indicate that the impacts to desert bighorn sheep are potentially significant (Class II). Mitigation Measure B-9f has been proposed to reduce impacts during lambing periods. Refer to the CPUC website for more detailed description of mitigation measures and APMs.

In Arizona, each of the Proposed Project segments contain Sonoran Desert scrub habitat that has the potential to support desert tortoise. A juvenile desert tortoise was identified during surveys conducted in the Kofa to Palo Verde Valley segment west of the Dome Rock Mountains. Although desert tortoise was not found during surveys of the other Arizona segments and the area has not been designated as critical habitat for this species, the habitat is still considered suitable for the desert tortoise. In addition, desert tortoises are known to occasionally travel long distances (up to several miles or more) and could move into the project area in any segment. Impact B-7 (construction activities could result in the loss of listed habitat) indicates that construction activities could be potentially significant (Class II). SCE has proposed implementation of APMs B-5, B-18, B-27, B-28, B-29, B-30, B-31, B-32, and B-35 to reduce impacts to the desert tortoise. Mitigation Measures B-1, B-7b, and B-7c were proposed to further reduce impacts to the species. Even with implementation of APMs and Mitigation Measures, construction could result in the incidental take of this species. Refer to the CPUC website for more detailed description of mitigation measures and APMs.

Recreation Project construction activities create a number of temporary negative impacts that would diminish the recreational value of the Refuge. For example, the noise, dust, and traffic generated during construction activities negatively affect a visitor's enjoyment of the recreation

area. Recreationists may be less likely to visit this resource during project construction. The location of construction equipment may also temporarily preclude access to some recreation areas. Such a disturbance to recreational activities or a reduction in the visitation to the Refuge due to construction activities would result in potentially significant impacts, as described in Impact WR-1 (construction activities would temporarily reduce access and visitation to recreation or wilderness areas) (Class II) and WR-2 (operation would change the character of a recreation or wilderness area, diminishing its recreational value) (Class I). Mitigation Measure WR-1a has been proposed during construction to reduce impacts to a less than significant level. Mitigation Measure WR-2a was added to the FEIR/EIS to minimize the loss of recreational resources. However, despite implementation of Mitigation Measure WR-2a, impacts to the recreational value of the Refuge would remain significant. Refer to the CPUC website for more detailed description of mitigation measures and APMs.

The existing DPV #1 transmission line has already introduced an industrial component to the land use across the Refuge. While the Proposed Project would not introduce a new industrial use across an undeveloped recreation area, it would intensify the industrial nature of the ROW through the construction and operation of new towers and spur roads across the Refuge. The proposed transmission towers are large structures, approximately 150 feet in height. Given the substantial size of these structures and their industrial appearance, the proposed transmission towers would contrast with the natural landscape of the Refuge. New towers would be constructed across 24 miles of the Refuge, and as such, DPV #2 would significantly increase the total amount of industrial development within the Refuge further degrading its landscape and character. The BLM/CPUC identifies Impact V-1 (which addresses short-term construction activities) as less than significant impacts on the Refuge's segment. Mitigation Measures V-1b (reduce visibility of construction activities and equipment) and V-2b (reduce construction night lighting impacts) were recommended to reduce impacts. Long-term, operational visual impacts would be experienced by travelers and recreationists accessing the Refuge on Pipeline Road and Crystal Hill Road. Operation of the project would change the character of the Refuge and would significantly diminish its recreational value. Impacts to the Refuge would be significant and unmitigable (Class I). Mitigation Measure V-3a (reduce the contrast of towers and conductors) has been proposed to reduce impacts; however, the impacts remain significant. Refer to the CPUC website for more detailed description of mitigation measures and APMs.

Noise Construction activities occurring within the Refuge would temporarily increase the noise within the Refuge. This would occur at the locations of construction activity and along all transport access routes which traverse the Refuge. Within approximately 200 feet of the transmission line corridor, peak noise levels over 88 dBA and average noise levels over 65 dBA could occur during construction. Along access routes, approximately 75 dBA would occur with passing trucks. Potential noise impacts in the Refuge's segment would be significant (Class II) during construction of the project. Mitigation Measure N-1a has been proposed to reduce the likelihood of substantially disturbing receptors within the Refuge, because "quiet" is a basis for use of the area and adjacent wilderness. Through implementation of this mitigation measure the impact would be reduced to less than significant, but remain adverse to recreational use on the Refuge. Refer to the CPUC website for more detailed description of mitigation measures and APMs.

Once operational, constant noise from the overhead transmission line would occur from corona discharge and regular inspection or maintenance activities. Noise generated from inspection and maintenance along the overhead route would not change substantially when compared to the existing conditions. Audible noise from corona discharge along a 500 kV line can be well above background ambient noise levels, especially during wet weather. Corona noise from DPV #2, when considered in combination with existing noise levels generated by DPV #1, would exceed Environmental Protection Agency target levels. However, the proposed project would not cause a substantial (more than 5 dBA) change compared to existing conditions. As such coronal noise impacts would be adverse, but less than significant (Class III).

Air Quality The project would generate localized pollutant emissions from the construction equipment over the entire duration of installation. Minimal vehicular emissions associated with maintenance and repair of the transmission line would occur during operation of the powerline. Dust and equipment exhaust emissions would be caused by all construction activities especially where heavy amounts of travel would occur on unpaved roads and surfaces that would create fugitive dust. Use of construction equipment and emissions from motor vehicles would also adversely affect air quality because construction activities would emit pollutants that could contribute to existing violations of ambient air quality standards. The severity of impacts due to construction emissions depends on the local air quality and the regulatory requirements of each different local air quality management jurisdiction. Air quality impacts associated with regulatory requirements of the air quality jurisdiction applicable to Kofa NWR--provided by Arizona Department of Environmental Quality (ADEQ)--were found to be Class II (significant) for construction and Class III (adverse, but less than significant) for operation of the project. Mitigation Measure AQ-1 has been proposed to avoid potentially significant PM 10 impacts. For the potentially significant PM 10 emissions within Arizona Department of Environmental Quality, the use of this mitigation measure would reduce the impact during construction to a less than significant level. Refer to the CPUC website or more detailed description of mitigation measures and APMs.

Visual Resources Due to the relatively short duration of project construction for the Refuge segment (approximately 8 months) construction impacts would result in adverse, but less than significant (Class III) visual impacts. This impact is described under Impact V-1 (which addresses short-term construction activities) in the FEIS. Long-term, operational visual impacts would be experienced by travelers and recreationists accessing the Refuge on Pipeline Road and Crystal Hill Road. For travelers on Crystal Hill Road and the Pipeline Road, the moderate visual quality, high viewer concern and moderate-to-high viewer exposure lead to a moderate-to-high overall visual sensitivity of the visual setting and viewing characteristics. As described in Impact V-7 (increased visual contrast, view blockage, and skylining from viewpoint 4 on Crystal Hill Road in the Refuge) was found to be significant and unmitigable (Class I). While the impact of DPV #2 would remain significant, Mitigation Measure V-3a was recommended to reduce visual impacts along this portion of the project. Refer to the CPUC website for more detailed description of mitigation measures and APMs.

Public Health and Safety There remains a lack of consensus in the scientific community in regard to public health impacts due to Electric/Magnetic Fields (EMF) at the levels expected from electric power facilities. Further, there are no federal or State standards limiting human exposure to EMFs from transmission lines or substation facilities. For those reasons, EMF is not considered in the FEIR/EIS as a CEQA/NEPA issue and no impact significance is presented.

Cultural and Paleontological Resources Although no known eligible cultural sites are located within the Areas of Potential Effect (APEs) for this segment, there are four known sites (AZ R:7:66, AZ R:7:61, AZ R:8:42 and AZ R:8:49) recommended as NRHP-eligible that are located within the general corridor for this segment. Impacts to those or other newly discovered NRHP-eligible cultural resources could result from construction activities that require earth-disturbing effects. The construction impacts are most likely associated with erecting towers, creating tower pads, access road grading, digging of tower footings, and conductor pulling and splicing.

The potential to discover unanticipated cultural resources during construction exists throughout the Refuge segment of the Proposed Project and could reveal additional adverse effects to cultural resources. If unanticipated sites, features, and/or artifacts are discovered as a result of construction, and those are determined to be NRHP-eligible at the time of discovery, there would be an adverse effect. Adverse effects could be reduced by data-recovery investigations, but by virtue of the fact that such resources would be discovered after final project design and engineering, avoidance and protection of such resources would be infeasible. Therefore, if NRHP-eligible resources are impacted during construction, even after data recovery, effects would be adverse (Class I), under the regulations in the NHPA. A number of mitigation measures have been proposed in the FEIS to avoid the effects on cultural resources and to help minimize impacts to potential NRHP eligible sites. Avoidance and protection measures such as C-1a through C-1f were developed to reduce impacts to a less than significant level. Refer to the CPUC website for more detailed description of mitigation measures and APMs.

The potential to discover unknown buried Native American human remains or sacred features, in the form of primary inhumations, cremations, ceremonial bundles, or mourning ceremony features during construction could exist, resulting in adverse effects. If unanticipated buried Native American human remains or sacred features are discovered as a result of construction, then there would be a significant and unavoidable impact to the remains (Class I), an adverse effect under the regulations in the NHPA. Although these effects could occur, implementation of Mitigation Measures C-1c, C-1d, C-1e, C-1f, and C-2a were proposed to reduce the severity of impacts to the extent feasible.

Direct and indirect impacts may occur to sites within and in the vicinity of the project area during operation and long-term presence of the Proposed Project. Direct impacts could result from maintenance or repair activities, while increased erosion could result as an indirect project impact. This impact is potentially significant, but can be mitigated to a level that is less than significant (Class II) through the application of specific Mitigation Measures. Measures such as C-5a, in addition to Mitigation Measures C-2a, and C-3a, were proposed to reduce impacts to cultural resources. Refer to the CPUC website for more detailed description of mitigation measures and APMs.

The paleontological sensitivity of this segment varies from undetermined to high sensitivity depending on the rock unit encountered. For example, volcanic rocks would have low sensitivity (low possibility of fossil occurrence) and the Pleistocene older alluvium has a high sensitivity. Sensitive areas for paleontological resources are located from MP E43 to E60, E65.5 to E68, and E71 to E73 and could be impacted by construction. In addition, there is the potential to encounter undiscovered paleontological resources within this segment of the Proposed Project. Impacts to paleontological resources is potentially significant, but can be mitigated to a level that is less than significant (Class II). Mitigation Measures C-4a, C-4b, C-4c, C-4d, and C-4e include provisions for the discovery and treatment of significant fossil remains and would reduce project effects to these resources to a level less that significant (Class II). Refer to the CPUC website for more detailed description of mitigation measures and APMs.

Transportation and Traffic This segment would require transmission line stringing activity over the Refuge roads in three places, which could require the temporary closure of these roads. However, compliance with required encroachment permits would ensure that potential impacts associated with short-term road closures are less than significant (Class III).

Road closures could disrupt the operations of emergency service providers. However, in the event that an emergency service provider vehicle were to approach a roadway temporarily blocked by overhead construction activities, SCE would be able to accommodate the emergency service provider vehicle by immediately stopping work to allow the passage of the emergency vehicle with minimal delay. Impacts would be less than significant (Class III) and no mitigation would be required.

The utility road at the west Refuge boundary (U.S. Highway 95) to approximately Milepost 79.5 (where the utility road joins Crystal Hill Road) is not a public access road. The public may see construction vehicles using this road and think that it is available for public use. Public use of this road would result in an adverse, but less than significant impact (Class III).

In response to Service comments, Mitigation Measure T-14a was developed to require SCE to coordinate with the Refuge and develop the appropriate preventative measures to ensure unauthorized road access does not occur. Refer to the CPUC website for more detailed description of mitigation measures and APMs.

Wilderness Wilderness impacts in the Refuge were analyzed in the Draft and Final EIR/EIS and a significant, unmitigable impact was determined for wilderness/recreation on the Refuge. Impact WR-2 (operation would change the character of a recreation or wilderness area, diminishing its recreational value) indicates that the Proposed Project would have significant and unmitigable effects on for these resources (Class I).

II. *Further impact analysis by the Refuge Manager to supplement the FEIR/EIS of SCE-DPV #2 for the Refuge segment:*

Non-Native Invasive Species Invasive species are a major concern on the Refuge because they spread rapidly, out-compete native plants, increase the risk of fire in this desert environment and are less palatable or injurious to wildlife. In 2005, the King Valley Fire destroyed 26,000 acres

on the Refuge. This fire was exacerbated by the presence of non-native plant species such as Mediterranean grass *(Schismus arabicus* and *S. barbatus)*. Powerline ROWs have been identified by the Arizona Invasive Species Advisory Council as a vector for the spread of invasive plants because high levels of disturbance and habitat modification tend to favor a non-native flora. For example, powerline ROWs that run through intact vegetation in nearby southern California have been shown to be points of entry for several exotic species (D'Antonio and Haubensak 1998). Numerous infestations of Sahara mustard *(Brassica tournefortii)* and Mediterranean grass have been documented along the DPV #1 ROW in the Refuge.

Introduction of invasive species occurs not only from construction vehicles during the project but also from increased vehicle traffic on roads upgraded and maintained for the project, as when the pipeline road was widened and upgraded for DPV #1 and subsequently became a major travel route across the Refuge. Controlling invasive plant species continues to be a resource drain on the Refuge long after the completion of DPV #1. For example, Sahara mustard seed can remain viable for at least 3 years and may remain viable for much longer periods. Infestations may not be apparent until adequate rainfall occurs and often many years after introduction. An additional commitment of staffing and funding would be required to control invasive plant species following the completion of DPV #2. The proposed mitigation measures B-1a, B-2a, and B-2b are unlikely to be broad enough in scope or timeframe to address the problem. Adequate mitigation would require a commitment to invasive species control for the life of the powerline.

Vegetation and Soils Numerous direct and indirect impacts to native vegetation and soils will occur from construction of the powerline. Vegetation and soil communities in the Sonoran Desert are extremely fragile and take decades to recover from disturbance. The Refuge still bears scars from the construction of DPV #1 and from pipeline projects completed in the 1970s.

There are 5 woody species and 8 cacti species that are protected under the Arizona Native Plant Law that would be impacted by the project on the Refuge. Heavy equipment and vehicles will crush vegetation and compact soil, leading not only to direct plant mortality but also scarring and disturbance of habitat that is difficult to repair and inhibits recovery of the plant community. Hessing and Johnson (1982) documented the following impacts from construction of a 500kV powerline in the Arizona Sonoran Desert: 1) herbs were reduced temporarily during the construction phase of the study; 2) perennial herbs did not return in the 5-year post-construction period; and, 3) woody plants did not reestablish themselves. Direct seeding is generally unsuccessful in desert revegetation projects even when seeds are selected carefully and planted properly; it is an ineffective desert restoration strategy (Bainbridge and Virginia 1990, Bainbridge et al. 1995).

Ground disturbance also leaves native vegetation communities open to invasion by non-native species; powerline ROWs have been identified by the Arizona Invasive Species Advisory Council as a vector for the spread of invasive plants because high levels of disturbance and habitat modification tend to favor a non-native flora. Mitigation Measure B-6a and APMs B-1, B-2, B-3, B-8, B-9, B-12, and B-13 have been proposed to further reduce impacts to vegetation. These measures would help reduce direct mortality from crushing and habitat destruction but are

inadequate to restore the native plant community to its ecosystem functionality or provide long-term control of invasive plant species.

Large expanses of the terraces and basins in the Refuge are characterized by surfaces of highly compacted pebbles and cobbles known as desert pavement (Clark and Stein 2004). This unique physiographic formation is extremely susceptible to scarring from the disturbance of the desert varnish, a thin coating of minerals that slowly accumulates on the surfaces of exposed rocks. Thus vehicle tracks or other ground disturbance create light scars against the dark desert pavement that persist for decades.

Cryptobiotic soils may also be impacted by construction activities. Damage to these biological crusts can result in a cascade of adverse impacts to native Sonoran Desert communities. Soil compaction and disruption of cryptobiotic soil surfaces can result in decreased water availability to vascular plants through decreased water infiltration and increased albedo with possible decreased precipitation. Surface disturbance leads to accelerated soil loss through wind and water erosion and decreased diversity and abundance of soil biota (Belnap 1995). In addition, nutrient cycles can be altered through lowered nitrogen and carbon inputs and slowed decomposition of soil organic matter, resulting in lower nutrient levels in associated vascular plants. The nitrogen fixation capability of cryptobiotic soil requires at least 50 years for full recovery. Recovery of crusts can be hampered by large amounts of moving sediment and re-establishment can be extremely difficult in some areas (Belnap 1995). Disturbance of cryptobiotic soil may facilitate the further invasion of exotic plant species (Stohlgren et al. 2001).

APM B-3 has been proposed to avoid damage to soils. SCE has agreed to keep vehicles on established roads to the extent practicable, but this does not mitigate the damage from new spur roads and extensions, nor from unauthorized public use of spur roads. Mitigation Measure T-14a was proposed to address unauthorized public use of spur roads, but there is no practical, effective way to prevent unauthorized use and it will continue to be a problem for the foreseeable future. The amount of heavy equipment required for construction, including steel-tracked vehicles, would likely result in some off-road use within the construction zone. In addition SCE has indicated that the existing access road would need to be upgraded to protect the underlying gas pipeline. Disturbance and damage in the Sonoran Desert heals extremely slowly and revegetation and restoration is notoriously difficult and expensive. The APM proposed by SCE will not be sufficient to fully mitigate soil damage.

Radio Communications and Telemetry Field usage of the Refuge's communication system indicated that DPV #1 may be having a negative impact on radio communications and could effect radio telemetry equipment used by biologists to track wildlife when in use near the powerline. Interference and/or disruption to communications could be compounded by the installation of DPV #2, especially in light of the fact that the Refuge is currently using a fully digital system. Of concern is the impact of potential interference to communications along Crystal Hill and Pipeline Roads which could become a significant safety issue for staff, particularly during the hot summer months. There are several recent examples where staff could not communicate with other mobile units in the field or with the Refuge's base station when in

close proximity to DPV #1. Interference will likely increase with the second line and this could also negatively impact ongoing bighorn sheep and mountain lion research and future wildlife studies that may incorporate the use of radio telemetry equipment, such as radio tracking collars.

During January 2007, SCE conducted field studies of the impact of DPV #1 on radio communications. Although no interference was recorded, SCE's Radio Technicians stated that further study would be required to fully assess the potential impact of DPV #1 (as well as DPV #2) on radio communications. Emphasis will need to be placed on radio communications during the summer months when the coronal noise and potential for interference is likely to be at its highest level. Mitigation Measures PS-1c, PS-1a, and PS-1b may help alleviate interference with radio communications and SCE has made efforts to address the communication gaps on the Refuge. However, there is likely no mitigation available for interference with radio telemetry equipment. Radio tracking is an integral part of the management plan for sheep recovery and will continue to be an essential component of Refuge research.

Bird Strikes The FEIR/EIS provides that bird strikes may occur along certain segments of DPV #2, but not within the Refuge segment. This only indicates that no bird strikes have been documented within the Refuge segment, not that the potential for bird strikes is absent or that it is not already occurring with DPV #1. The Service believes that bird strikes are already occurring within the Refuge segment and will be exacerbated by the addition of DPV #2. The bird strike potential is thought to be at its highest during peak migration periods in the spring and fall when neotropical migrants are moving north-south through the Refuge and encounter the east-west ROW corridor. Although no specific information about bird strikes on the Refuge segment exists, accounts of avian fatality from collisions with power lines and utility structures are abundant in scientific literature. Fatal impacts associated with transmission lines have been documented for nearly 350 species (Manville 1999), representing 15 orders and 35 families and subfamilies in 14 countries worldwide and 26 states, including Arizona and nearby California, in the United States (Hunting 2002). In some cases, the level of fatalities attributable to these collisions has been substantial and has contributed to declines in local and regional populations (Mathiasson 1999, APLIC 1994). A mortality rate of 521 fatal strikes/km was measured at Mare Island, California, by Hartman et al. (1993).

Of the 35 avian subfamilies mentioned above, 26 have been documented on the Refuge (USDI 1996). Bird surveys conducted from 1986-1991 on the Refuge confirmed the presence of many species of migrants (KNWR 1986-1991). While conditions on the Refuge differ from those on Mare Island, even a lower mortality rate applied to the 24-mile (38.62 km) linear extent of transmission lines on the Refuge could cause a significant impact to migratory birds. Upland studies suggest a rate of 1-2.5 fatal strikes/km/year, with the caveat that these numbers are likely underestimated (Avery 1979). Applying this rate to the Refuge would suggest an annual avian mortality of around 97 birds per year. Mitigation measure B-15a may reduce avian mortality, but adverse impacts are still possible.

Transportation The FEIR/EIS mentions impacts to transportation associated with the construction phase of the project. Although impact to recreational use and emergency services

are addressed, the document does not address the impact to the daily Refuge management activities. During the 8-month construction phase of the project, there are likely to be conflicts between Refuge staff use of the Crystal Hill and Pipeline Roads and that of the proponent's contractors. Alternative routes exist to avoid certain segments, but not for the entire length of the powerline. Consequently, there may be areas of the Refuge that are inaccessible to staff for extended periods or where Refuge staff may be inconvenienced by traveling to certain areas via alternative routes (e.g., high clearance/4-wheel drive roads). In addition, Refuge visitors often drive on spur or ROW roads even though they are not designated public access roads. This creates a law enforcement problem and leads to greater impacts to vegetation and wildlife. Careful planning and coordination could minimize these conflicts, but there is no practical mitigation available to effectively address the law enforcement and resource damage issues brought about by unauthorized public use of spur or ROW access roads improved or added by the DPV #2 project.

DPV #1 is currently an aviation hazard and disrupts the annual mule deer aerial survey transects, which are flown at 100-150 feet AGL. Flying over the DPV #1 necessitates repeatedly departing survey protocol to clear the lines, which may lower the probability of detecting animals and skew the results. DPV #2 would exacerbate the problem by requiring longer departures from or other alterations to survey protocol to clear both sets of lines.

Wildlife The Refuge's desert bighorn sheep herd is one of the largest in the state and was a major catalyst for establishing the Refuge. The herd is a vital source of genetic diversity, both through emigration to nearby mountain ranges and through transplants to other locations in the southwestern United States. Because of its recent desert bighorn sheep population declines, the Refuge has delayed its transplant program. Since 1957, 569 bighorn sheep have been translocated from the Refuge to 21 different locations in Arizona, Colorado and New Mexico. The Refuge's herd has been a crucial source for reestablishing extirpated desert bighorn populations in historic habitat and for supplementing dwindling populations. Notable reintroductions occurred at Aravaipa and Paria Canyons and Goat Mountain, all of which support viable populations of bighorn sheep today. There continues to be a high demand for sheep of the *mexicana* subspecies to repopulate extirpated or dwindling populations in southern and central Arizona and New Mexico. Any impediment to sheep population recovery on the Refuge could greatly impact ongoing recovery efforts at San Andres NWR and in other important mountain ranges in Arizona, New Mexico,and Texas.

The triennial sheep surveys conducted on the Refuge revealed a decrease from an estimated 815 sheep to 623 sheep from 2000 to 2003. This downward trend appears to be continuing in 2006 with preliminary estimates for the population at 390 animals. While the reasons for this decline are unknown, additional disturbance or fragmentation of sheep habitat on the Refuge are likely to exacerbate the problem and complicate recovery efforts for the species. Actions which significantly increase human activity in key portions of bighorn ranges can do great harm (Graham 1980). FEIR/EIS Mitigation Measure B-9f will help reduce impacts, but adverse effects may still occur, especially in the active breeding season (August-October).

Studies on bighorn sheep conducted during construction of DPV #1 documented the importance of the New Water Mountains and Livingston Hills to bighorn sheep. The Livingston Hills were used for lambing, and rams frequently moved between the New Water Mountains and the Livingston Hills, a route that is now bisected by DPV #1 (Cochran et al. 1984). This route would now be further bisected by DPV #2. The authors stated the importance of having as few obstructions (fences, roads, housing) as possible between mountain groups occupied by bighorn. Another study also found that transmission line construction activities precluded normal ram crossings between the New Water Mountains and the Kofa Mountains/Livingston Hills (Smith et al. 1986). This could be a major problem if construction is concentrated outside the lambing season – in which case it might be occurring in the summer months when rams are moving between ranges in preparation for breeding. This would disrupt breeding activities at a time when the herd is in decline. Construction should not occur during the primary breeding season of August-October. Without additional data it is difficult to say what the precise impacts of two transmission lines operating together would be on bighorn sheep movements, but given the effects DPV #1 has had on bighorn sheep, the potential for habitat fragmentation and population isolation exists.

Lambing is one of the most critical life history stages and one of the most significant bighorn life history parameters sensitive to impact (Smith et al. 1986). Ewes will seldom lamb in an area disturbed by outsiders and permanent human occupancy near key lambing areas will cause bighorn to move away (Graham 1980). Although Witham (1983) documented that 75% of lambing occurred between January and March, lambing did occur in all months except October and 25% of births occurred in months with low lambing frequencies. We would recommend that construction not occur during the most active lambing period (November-April). SCE believes that prohibiting construction during this period would essentially preclude construction. In the most recent meeting with SCE on January 9, 2007, SCE informed the Service it would avoid as much of the lambing period as possible with construction for the Refuge segment proposed to occur between May and December 2008. Although their construction plan would avoid a large portion of the most active lambing period, overlap remains during November and December and the potential for significant impacts in the New Water Mountains, Kofa Mountains, and Livingston Hills remains a concern because of the potential for significant negative effects on bighorn sheep.

The cumulative width of the transmission and ROW corridor for DPV #1 and DPV #2 could be large enough to discourage crossing by smaller animals such as reptiles. Wildlife potentially affected include FWS Species of Special Concern, State Species of Special Concern and/or BLM Sensitive Species such as the rosy boa, common chuckwalla, Gila monster, and desert tortoise. Rosy boas and Gila monsters have been recorded in the general vicinity of the project, and the Refuge has documented populations of desert tortoises in the Livingston Hills and New Water Mountains. Because the absolute mobility of reptiles is considerably less than that of birds or larger mammals, they have a greater potential to be affected by barriers such as roads (MacNally and Brown 2001). Habitat fragmentation on a small scale still has the potential to alter the demographic and genetic structures of populations (Soule 1987). The removal of vegetation and temporary disturbance necessary for construction and maintenance could eliminate the necessary

ground cover or protection needed by some species to cross the corridor and results in habitat fragmentation. Air temperature and soil moisture in the Sonoran Desert are moderated by shrub or tree canopies (Patten 1978), so even temporary disturbance can create an unfavorable microclimate for small mammals or reptiles.

The additional spur roads will increase the probability that these small, slow-moving animals will be hit by vehicles, either during construction or from unauthorized use by visitors after construction. Because many small mammals are nocturnal, many may be crushed in their burrows by construction activities during the day. Roads can significantly modify the distributions, movement patterns, and mate-location abilities of snakes (Shine et al. 2004). Although no specific data exits for the Refuge, rosy boas appear to be significantly impacted by highways in southern Arizona (Rosen and Lowe 1994). APMs B-5, B-18, B-27, B-28, B-29, B-30, B-31, B-32, and B-35 would help reduce impacts, but adverse effects such as direct mortality of reptiles and small mammals, fragmentation of their habitat and disruption of their movements would remain after implementation of these APMs.

Removal of vegetation could also affect nesting and foraging of migratory birds, including 5 species identified as indicator species for the health of the Sonoran Desert Scrub Ecosystem by the Arizona Partners in Flight Bird Conservation Plan: Lucy's warbler, Le Conte's thrasher, gilded flicker, Costa's hummingbird, and lesser nighthawk. The Costa's hummingbird, Lucy's warbler and gilded flicker are confirmed nesters on the Refuge. The Sonoran Desert scrub which constitutes the primary habitat for the Costa's hummingbird is facing increasing threats from habitat modification (Baltosser and Scott 1996). The decline of the Le Conte's thrasher's breeding range is largely attributed to habitat degradation involving the destruction of substrate, litter and shrubs (Latta et al. 1999). APMs B-22, B-23, and Mitigation Measure B-5a would help reduce immediate mortality and nest disturbance impacts during construction, but adverse effects could still occur to migratory birds from temporary and permanent habitat destruction which could affect food and nest site availability long after construction has ended. No burrowing owls have been recorded on the Refuge, and although potential habitat exists for this species, the mitigation measures identified in the FEIR/EIS are considered adequate.

With approximately 100 acres of total ground disturbance DPV #2 is expected to impact birds, reptiles, and small mammals, both during construction and during the extended recovery period that will be required to alleviate disturbances and damages to the desert environment. Disturbance and damage in this environment heals extremely slowly and revegetation and restoration is notoriously difficult and expensive. The Refuge still bears scars from the construction of DPV #1 and from pipeline projects completed in the 1970s. Mitigation Measure B-6a and APM's B-3, B-8, B-9, B-12, B-13, and B-14 would reduce these impacts. However, restoration of the vegetation community structure and function to meet the habitat requirements of small mammals and reptiles would take many years to be successful, if at all.

Cultural and Paleontological Resources Based on extensive surveys over the last 30 years it has been determined that the probability of impacts to archeological sites is negligible within the Refuge segment of DPV #2. Although this information is in conflict with the findings described in the FEIR/EIS, the Services' Regional Archaeologist is in agreement with these findings.

Consequently, consideration of cultural and paleontological resources will have a minimal role in the determination of compatibility for DPV #2. The Service continues to support implementation of the mitigation measures provided in the FIER/EIS and as outlined above. It also recognizes its role to ensure that applicable law and policy is adhered to in respect to these resources if the project were to be implemented.

Wilderness The direct wilderness impacts addressed in the FEIR/EIS for the Refuge segment are not applicable because the proposed ROW for DPV #2 is not within designated wilderness. As long as the total width of the ROW for DPV #2 does not increase to beyond the proposed 130-feet described for the project there will be no direct impacts to wilderness on the Refuge. However, during October 2006 a recommendation was made to the Arizona Power Plant and Transmission Line Siting Committee (Committee) to widen the ROW along the Arizona portion of DPV #2. A final decision on this recommendation is pending in the Committee. If the ROW width increases to more than 130 feet, there would be direct impacts to wilderness on the Refuge and the compatibility determination would need to be modified to address impacts to this resource. Expansion of the ROW would also require action by Congress to address the wilderness portion of the project affected by the decision. Clearly, if the ROW is expanded, Impact WR-2 (operation would change the character of a recreation or wilderness area, diminishing its value) would result in significant and unmitigable impacts to the Refuge's wilderness.

Because DPV #2 will abut a designated wilderness area, there are indirect impacts to wilderness such as increased unnatural noise, further industrialization of the landscape, reduced visual quality and the increased potential for the introduction of invasive species. Consideration of these indirect impacts to wilderness is not the basis of the Service's CD for DPV #2, but it is relevant to our analysis. If we did not consider these indirect impacts, our ultimate decision on compatibility would not change. By considering these indirect impacts, we are not expanding the boundary of the Refuge's wilderness; we are simply considering all available information. The indirect impacts on wilderness will be at their greatest during the eight months of project construction. Traffic on the pipeline road will increase substantially during this period, heavy equipment will be working regularly at tower sites, and helicopters will be stringing conductors. SCE has attempted to mitigate for these indirect impacts by concentrating construction during a period when wilderness visitor use is at its lowest. However, there will be at least three months in which construction overlaps the busy winter visitor season and the indirect impacts will be significant.

During operation, the indirect impacts to wilderness would be lower overall, but permanent in nature. One of the primary indirect impacts during operation would be increased coronal noise, up to 5 dBA, or over double the noise under the existing condition (3 dBA would result in double the noise). This noise would undoubtedly be heard by those attempting to experience wilderness over a greater distance. The 85 additional towers added to the Refuge and associated conductors along the 24-mile transmission line corridor will be visible for at locations where the project does not have a mountainous back-drop. These attributes increase industrialization of the landscape and affect natural conditions as well as wilderness character and values. They also degrade the visual quality of the area for the wilderness user on adjoining lands. The indirect impacts to the

Refuge's wilderness during the operation of the powerline would be significant and unmitigable for the life of the project. Based on the above indirect impacts to the Refuge, the Service would not achieve the mandates provided to federal agencies under the Wilderness Act of 1964 (Public Law 88-577), described in sections 2 (a), 2 (c), and 4 (b):

> Section 2 (a) *"... lands designated for preservation and protection in their natural condition..."*
>
> Section 2 (c)*"...an area where the earth and its community of life are untrammeled by man... ...an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvement or human habitation...generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable... has outstanding opportunities for solitude or a primitive and unconfined type of recreation..."*
>
> Section 4 (b)*"...shall be devoted to the public purposes of recreation, scenic, scientific, educational, conservation and historic use."*

Recreation The Refuge is an important area used by the American public for wildlife-dependent recreation. DPV #2 is a non- wildlife dependent use, which means it does nothing to enhance the American public's opportunity to develop an appreciation for fish and wildlife. Compatible wildlife-dependent recreational uses (e.g. hunting, wildlife observation and wildlife photography) are the priority general public uses of the National Wildlife Refuge System and shall receive priority consideration in refuge planning and management (16 U.S.C. §668dd(a)(3)(C)). This is further supported in the Service's policy on Wildlife Dependent Recreation (605 FW 1). The importance of wildlife-dependent recreation is evidenced in the forty-five public comments to the draft compatibility determination that support the Service's draft decision that permitting DPV #2 will be incompatible with the NWRS mission and refuge purposes. DPV #2 would also have a significant negative affect on those enjoying uses such as bird watching, wildlife observation, wildlife photography, hunting, camping, and hiking on the Refuge. Those who seek solitude or primitive and unconfined recreation would be greatly affected by the increased noise of the project and the further industrialization of the landscape and the reduced visual quality of the area which results from the second powerline. Essentially the value of the Refuge for wildlife-dependent recreation would be degraded to the point that Refuge users may no longer visit this portion of the Refuge and would seek out other areas for their wildlife-dependent recreational experience. In considering the impact of the proposed use to wildlife-dependent recreation and other important recreational uses, the impact would be significant and unmitigable.

NWRS Mission and Goals This policy (603 FW 2.5) states, "Uses that we reasonably anticipate to reduce the quality or quantity or fragment habitats on a national wildlife refuge will not be compatible." DPV #2 would interfere with and detract from the NWRS mission which directs the administration of a national network of lands and waters for the conservation, management and restoration of fish, wildlife and plant resources and their habitats (601 FW 1.6). The proposed use would cause significant habitat fragmentation along the 24-mile transmission line

corridor with the loss of nearly 100 acres of pristine Lower Colorado River desert scrub through ground disturbing activities. The Refuge's declining desert bighorn sheep population, a regionally and nationally significant resource, could be negatively affected by the potential mortality of individual animals, further isolation of three critical lambing areas and potential restriction of sheep movements between three mountain ranges. Less mobile species such as reptiles and small mammals would be affected through direct mortality, habitat loss and fragmentation.

DPV #2 would increase industrialization and noise within the landscape, further degrading the quality of the visitor experience. Recreational uses such as hunting, camping, wildlife observation, photography and hiking would be most affected. Increased industrialization of the Refuge would also significantly affect visual resources by decreasing the quality of the visual setting and viewing characteristics, particularly from adjacent wilderness. Invasive species issues would be exacerbated by habitat disturbance within the powerline ROW and along access and spur roads. Given the above impacts, the project would prevent the Service from fulfilling NWRS goals (601 FW 1.9), specifically Goal A (conserving wildlife and their habitats; maintaining biological integrity, diversity and environmental health; conservation of representative ecosystems and their processes) and Goal D (wildlife dependent recreation).

Refuge Purposes, Goals and Objectives DPV #2 would materially interfere with and detract from Kofa National Wildlife Refuge's primary purpose to "...conserve and develop natural wildlife resources...," as outlined in Executive Order 8039. The impacts listed above under NWRS Mission and Goals also support this determination. Additionally, installing the 500kv DPV #2 powerline is in conflict with the following specific goals and objectives outlined in the 1996 Kofa National Wildlife Refuge and Wilderness and New Waters Mountains Wilderness Interagency Management Plan and Environmental Assessment (USDI 1996):

1. The Refuge's Management Strategy (p. 29): "The management program is designed to protect natural resources and values of the planning area into the long-term and to provide for public appreciation of the Refuge as appropriate and compatible with the purposes for which it was established."

2. Objective #2: Wildlife and Habitat Management (p. 32), "Maintain and enhance the natural diversity of flora and fauna within the Refuge by...preventing the introduction of new exotic pathogens into the area that could adversely impact wildlife...identifying sensitive wildlife areas and minimizing visitor use conflicts...and providing for allowable resource uses within an ecologically compatible and sustainable framework."

3. Objective # 3: Recreation, Legal Access and Public Information (p. 35), "Maintain high quality opportunities for recreation within the planning area, and where applicable wildlife dependent, and/or primitive recreation that is compatible with the purposes for which the Refuge...were established."

A Refuge Manager "should deny a proposed use without determining compatibility" if the proposed use conflicts with the goals or objectives in an approved refuge management plan (*e.g.*,

comprehensive conservation plan, comprehensive management plan, master plan or step-down management plan)" (65 Fed. Reg. 62489, §2.10(D)(c)).

Appropriate Uses DPV #2 conflicts with the Service's Appropriate Uses policy, which provides that all uses occurring on a refuge must be appropriate, and in order to be considered appropriate, the use must meet at least one of the following three conditions: 1) it is a wildlife-dependent use; 2) it contributes to fulfilling refuge purposes, NWRS mission, or goals and objectives outlined in the management plan for the unit; or, 3) the Refuge Manager has reviewed the use within the context of law and policy and determines it is appropriate. DPV #2 is clearly not a wildlife-dependent recreational use of the Refuge since construction and maintenance of a 24-mile long powerline, access roads and general ground and visual disturbances do not contribute but detract from the priority wildlife-dependent recreational uses of hunting, fishing, wildlife observation, photography, environmental education and interpretation. DPV #2 does not contribute to fulfilling to the Refuge purposes because it does nothing to promote the "conservation and development of natural wildlife resources."

A proposed use is exempt from the criteria outlined above if there is a prior existing right for the use. The construction and operation of DPV #2 does not meet the above criteria nor does SCE have a prior existing right for the use; therefore, the use is considered an inappropriate use on the Refuge. The Service recognizes that alone this policy is not the basis for incompatibility and ROWs are handled through the realty permitting process outlined in 50 CFR 29.21. However, the policy can be used to clarify the agency's compatibility determination on a proposed use.
Mitigation Measures The FEIR/EIS includes proposed numerous mitigation measures to reduce the impacts of the project to the above listed resources (Aspen Environmental 2006). These measures were developed by the BLM/CPUC or by SCE and some have been modified or added based on Service comments on the Draft EIR/EIS and Administrative FEIR/EIS. The Service has incorporated the key measures for the Refuge's resources into its final CD (refer to Anticipated Impacts of the Use).

As described in the FEIR/EIS, the proponent (BLM/CPUC) would require the applicant (SCE) to implement specific techniques or approaches, or modify the timing and duration of specific events to reduce impacts to specific resources. These mitigation measures are designed to reduce the impacts to a less than significant level, minimize the impact or eliminate it altogether. The following are pertinent to determining the validity and effectiveness of proponent/applicant proposed mitigation measures: 1) no data exist to support their determination of significance; 2) adverse impacts would remain in most resource categories following their implementation; and, 3) compensatory mitigation measures have been proposed for certain resource categories which are not allowed under agency policy (603 FW 2.11C).

From its review of mitigation measures, the Service has determined that impacts to the Refuge's resources would fall into one of the following categories: 1) impacts would be reduced to a less than significant level but remain as adverse impacts for air quality, transportation/traffic, soils, and certain wildlife species; 2) mitigation measures would be inadequate to address the potential impacts to critical resources such as desert bighorn sheep (e.g., movements and reproduction),

vegetation, invasive species, and small mammals and reptiles; therefore, those impacts would remain significant in the long-term; and 3) impacts would be significant and unmitigable for visual and wildlife-dependent recreation resources and cause the greatest concern for the future management of the Refuge. Any adverse or significant impacts remaining after implementation of proponent and applicant proposed mitigation measures would prevent the Service from achieving its mandates under law and policy. For more detailed discussion of the impacts remaining after implementation of proponent and applicant proposed mitigation measures refer to the Appropriate Uses category earlier in this section.

Cumulative and Indirect Effects Cumulative effects may include the impacts on the environment that result from the incremental impact of an action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or entity undertakes such other actions. The effects of individual minor disturbances and other changes to the environment by humans will accumulate when the frequency of disturbances is so high that the ecosystem has not fully rebounded before another stressful event is introduced. As referenced above, the Refuge environment has not fully rebounded from the damages caused by the installation and operation of DPV #1, and with regard to noise and visual impacts, the Refuge will never rebound. The construction of DPV #2 introduces new stressors to the Sonoran Desert ecosystem that are additive to the effects of DPV #1 and other disturbance activities that are associated with greater access into the Refuge.

An immediate impact to consider is the necessity of grounding the existing El Paso Natural Gas pipelines against A/C current generated by DPV #1 and DPV #2. El Paso Natural Gas has recently indicated it will be cooperating with SCE on a project to install 17 ground beds in 6 locations within El Paso's 15-mile ROW on the Refuge. Installing these beds requires drilling 17, 2-foot diameter holes between 47 and 320 feet deep, removing the native soil, installing a conductor rod in the center of the hole, and backfilling the hole with an inert carbon slurry. This grounding project has serious ground-disturbing and industrialization effects by itself in addition to the cumulative impacts of the project in association with DPV #1 and DPV #2. El Paso has indicated that the project is primarily to bleed off excess A/C current from the operation of DPV #1 and DPV #2 together, but that the project is also necessary to prevent A/C interference from increased load on the DPV #1 line even if DPV #2 is not constructed. Although SCE is funding the A/C protection project, the Refuge was not informed of its necessity until another energy provider (El Paso Natural Gas) requested a Special Use Permit. The A/C protection project should have been (but was not) included as a cumulative impact in the environmental impact statement for DPV #2.

Past and present actions on the Refuge that have created noise and dust and destroyed flora and fauna include the construction and operation of DPV #1 ROWs and the associated construction and maintenance for natural gas pipelines, military overflights, mining, and increased use of the Refuge by off-highway vehicles (OHVs) -- many of which use DPV #1 spur roads which are closed to public vehicles. The additive effects of DPV #2 to these past and present actions are significant. Adding DPV #2 may present a visual barrier to desert bighorn sheep, fragmenting the habitat north and south of the ROW and isolating the populations. SCE biologists believe

that ROWs are not a concern for management of desert bighorn sheep based on their experience during construction of the SCE-DPV #1. We are unaware of data to support this assertion for multiple ROWs in similar habitat. Consequently, the cumulative impact of the addition of DPV #2 between the Refuge's important desert bighorn sheep habitat and lambing grounds and the travel corridors between the two is a major concern for management of these populations into the future, particularly now that this important population is in decline. As mentioned earlier, the desert bighorn sheep population on the Refuge has provided numerous animals for transplant across the southwestern United States. Any further degradation of the population will not allow for these transplants which may in turn impede the potential population viability of desert bighorn sheep in Texas, Colorado, Arizona, and New Mexico.

The construction and operation of SCE-DPV #2 could result in cumulative impacts to other wildlife populations on the Refuge, particularly those that are less mobile such as reptiles and small mammals. The additional width of DPV #2 further fragments their habitats and could affect the movements of these animals within and between important habitats resulting in population isolation. Direct mortality from the crushing of individual animals or burrows could also result in cumulative and significant impacts to these species. The new spur roads and spur road extensions, and the required upgrades to the existing roads for DPV #2 will provide new vectors for invasive plant species, especially since invasive plants are already present along Pipeline Road and can be easily carried by workers, vehicles or the public into newly disturbed areas.

DPV #2 would also result in cumulative impacts to recreation and visual resources. Increased noise associated with the construction and operation of DPV #2, OHV use and further industrialization of the area would diminish the Refuge's recreational value. Alternatively, without the noise created by these actions the remoteness of the Refuge makes it one of the most quietest places in Arizona. With the addition of DPV #2, visitor use along the route is likely to decline and the quality of the visitor experience for uses such as camping, hunting and wildlife observation would be negatively impacted due to noise and dust. Finally, the 85 additional structures and conductors associated with DPV #2 along the 24-mile corridor further decreases the visual quality of the area as a whole. When the impacts to recreation and visual resources from DPV #2 are considered together, the cumulative impacts on public use programs would be significant and considered an irreversible and irretrievable degradation of the Refuge's recreational resources.

The Sonoran Desert environment contains a complex set of interdependent, highly sensitive ecological relationships. Nowhere is this more evident than the cumulative effects caused by the degradation of soils and destruction of plants that will be caused by the increased OHV use that will be encouraged by the installation of DPV #2 with its increased access points. The Refuge has documented that some OHV users use the DPV #1 ROW spur roads in violation of Refuge regulations to move deeper into the Refuge. The addition of another spur road and extension of existing spur roads required for DPV #2 will only increase illegal incursions onto the Refuge. Once into the interior of the Refuge, OHV users often leave the DPV #1 spur roads and cross sensitive areas destroying soil and plants. Destroying soils and the biotic crust that keeps it

together increases soil erosion and dust and removes the soil substrate so that plants cannot become established. Soil and plant destruction negatively impacts wildlife species that depend upon these resources for food and shelter. The destruction of these resources has a cumulative negative impact on the Sonoran Desert ecosystem because destroyed soils lead to fewer plants, which eliminates the habitat upon which wildlife depends for food, water, and shelter. Illegal OHV use also creates noise that adversely affects the quality of the recreational experience for other users. Adding and extending more spur roads would exacerbate these negative impacts caused by OHV users.

Predicting reasonably foreseeable future events is the most difficult part of this analysis. We believe that the addition of the negative impacts caused by DPV #2, when added to the impacts of past and present actions are more than enough to determine that DPV #2 is incompatible with the Refuge mission. However, we have attempted to analyze the effects of some reasonably foreseeable future actions. We expect Refuge visitorship to increase because it has done so steadily over the past several decades. We expect the populations of California and Arizona to continue to increase as those populations have done in the past twenty years. This increase in population will drive greater demand for water and power. Therefore, we have every reason to believe that SCE and/or other power companies will attempt to seek future utility ROWs on the Refuge if this expansion in the industrialization of this corridor is allowed. OHV use has steadily increased since the installation of DPV #1 and we expect that trend to continue. All of these reasonably foreseeable future events, when added to past and present actions, will continue to negatively impact the Refuge mission and subsequently the American public which depends upon the Refuge for quality wildlife-dependent recreation.

**Public Review and Comment:**
Public review of this compatibility determination was accomplished as follows:

1. Posting a notice at the Refuge Office in Yuma, Arizona;
2. Soliciting public comments through the use of a News Release forwarded to all major newspapers in Arizona and posted on the Refuge's Public Website;
3. Providing the document for public viewing at the Yuma County Library District.

Comments were received for 30 days from the date of posting on November 29, 2006. A total of 49 comments were received on the project from a variety of individuals and groups. The agency analyzed the comments to determine the substantive issues to be addressed in the final CD. The issues are arrayed in the attached matrix along with agency responses to each (refer to Attachment #1). This matrix along with the Final CD will be made available to the public upon request and via a link the Refuge's website once the document is finalized.

**Determination (check one below):**
_X_ Use is Not Compatible
____ Use is Compatible With Following Stipulations

**Stipulations Necessary to Ensure Compatibility:** None

**Justification:**
The unmitigable impacts to recreation and visual resources from DPV #2 are significant and unrecoverable. Additionally, there could be significant impacts to desert bighorn sheep with the addition of the second powerline related to noise and creation of a visual barrier, and adverse impacts to other wildlife species from habitat loss and fragmentation. Considering the known and potential impacts of DPV #2 to the Refuge, the project would clearly affect our ability to achieve the NWRS mission, goals and refuge purposes including Goal A (conserving wildlife and their habitats; maintain biological integrity, diversity and environmental health; conservation of representative ecosystems and their processes) and Goal D (wildlife dependent recreation). The project would be in conflict with each of the Refuge's purposes as provided in Executive Order 8039 and the National Wildlife Refuge System Administration Act of 1966, as amended, as well as number of specific objectives and management actions for wildlife and habitat management, recreation and public access, as contained in the 1996 Kofa National Wildlife Refuge and Wilderness and New Waters Mountains Wilderness Interagency Management Plan and Environmental Assessment (USDI 1996).

The project would also be in conflict with the Service's Appropriate Uses policy, which provides that all uses occurring on a refuge must be appropriate, and in order to be considered appropriate, it must meet at least one of the following three conditions: 1) it is a wildlife-dependent use; 2) it contributes to fulfilling refuge purposes, NWRS mission, goals or objectives outlined in the management plan for the unit; or, 3) the Refuge Manager has reviewed the use within the context of law and policy and determined it is appropriate. A proposed use is exempt for the criteria outline above, if there is a prior existing right for the use. The construction and operation of DPV #2 does not meet the criteria, nor does SCE have a prior existing right for the use; therefore, the use is considered inappropriate on the Refuge.

More specifically, the proposed use, construction and operation of DPV #2 would result in the destruction of nearly 100 acres (temporary and permanent disturbance) of Lower Colorado River Sonoran Desert scrub and fragile desert soils within the Refuge. This habitat loss would impact 5 woody species and 8 cacti protected under Arizona Native Plant Law (Arizona Revised Statutes, Title 3). There is also the potential of at least 10 species of special concern to occur within the area where ground disturbing activities will occur. Construction and widening of spur roads would impact small mammals and reptiles through habitat fragmentation, population isolation, and direct mortality to animals. DPV #2 would result in the preclusion of normal desert bighorn sheep ram crossings during construction and is anticipated to impact an already declining population by restriction of normal movements between adjacent mountain ranges. Operation of the project could also have an impact on this regionally and nationally significant species by restricting or impeding their movements and by isolating populations.

At least five Arizona Partners in Flight indicator species could be negatively impacted by DPV #2 by destroying nesting or foraging habitats or disrupting nesting activities, particularly where construction of towers and installation of conductors are occurring in close association with desert washes. Temporary and permanent habitat destruction could affect food and nest site availability for migratory birds long after construction has ended. Collisions with towers and

conductors could also result in the direct mortality of migratory birds navigating through the Refuge during the fall and spring. Ground disturbing activities are likely to exacerbate invasive species problems along pipeline road and accelerate the spread of invasive species such as Sahara mustard.

The placement of 85 additional towers and associated conductors within the 24-mile transmission line corridor will further degrade and industrialize the landscape, decreasing the quality of the recreational experience on the Refuge and directly impacting uses such as hunting, wildlife observation, photography, camping and hiking. For those enjoying the Refuge the quality of the visitor experience would be significantly impacted by further degradation of the naturalness of the area. The visual quality of the landscape would decline as the second line along with DPV #1 would dominate the landscape. Increased noise from DPV #2 will degrade the user experience for those seeking solitude, as this noise will be heard for greater distances. The impacts to recreation and visual resources are considered significant and unmitigable.

The proposed use is inconsistent with various legal and policy mandates for the Service including NWRS Mission, Goals, and Refuge Purposes (601 FW 1); Biological Integrity, Diversity and Environmental Health (601 FW 3), and Wildlife Dependent Recreation (605 FW 1). It is also in direct conflict with the Refuge's overall Management Strategy as detailed on page 29 of the 1996 Kofa National Wildlife Refuge and Wilderness and New Waters Mountains Wilderness Interagency Management Plan and Environmental Assessment, Objective 2 - Wildlife and Habitat Management (p. 32) and Objective 3 - Recreation, Legal Access and Public Information (p. 35).

The Service has determined that impacts from DPV #2 would remain after implementation of proponent and applicant proposed mitigation measures. For resources such as air quality, transportation/traffic, and certain wildlife species the impacts would be reduced to a less than significant level, but adverse impacts would remain. For critical resources such as desert bighorn sheep (e.g., movements and reproduction), soils, vegetation, invasive species, and small mammals and reptiles, the measures were considered inadequate, and therefore would remain significant. For many of these impacts, there is no effective or practical mitigation available. For wildlife-dependent recreation and visual resources the impacts would remain significant and unmitigable. The significant and unmitigable impacts to these resources cause the greatest concern for the future management of the Refuge. Any impacts that remain adverse or significant following the implementation of proponent or applicant proposed mitigation measures would prevent the Service from achieving its mandates under law and policy.

The Service believes that the impacts of DPV #2 considered with DPV #1 and other past, present and reasonably foreseeable future actions would result in cumulative negative effects to key resources on the Refuge. As a direct consequence of the loss of habitat, fragmentation of habitat, potential barriers to movement corridors, and direct mortality, wildlife such as the desert bighorn sheep, reptiles and small mammals could experience incremental and significant negative impacts with the addition of DPV #2. Increased industrialization of the landscape and increased noise would degrade visual quality and recreational resources to the point that Refuge users

might seek other areas to participate in activities such as hunting, wildlife observation, wildlife photography, camping and hiking Secondary impacts on vegetation and soils from increased OHV use on access and spur roads would result from the construction and operation of DPV #2.

Destruction of ground-cover and disturbance of fragile soils would also lead to increased soil erosion in an area that has already experienced significant disturbance with the development and operation of DPV #1 and the El Paso Natural Gas Company pipelines. The recovery period is substantial in the desert environment and experience has shown that disturbance to soils may require decades to heal. Considering the incremental impacts for the above resources, coupled with the impacts from DPV #1, the El Paso Natural Gas Company pipelines and their proposed A/C grounding project, illegal OHV entry into closed areas, and ongoing mining activities, the impacts to biological integrity, diversity and environmental health of the Refuge would be cumulative and significant. The new spur roads and spur road extensions, and the required upgrades to the existing road for DPV #2 will provide new vectors for invasive plant species, especially since invasive plants are already present along Pipeline Road and can be easily carried by workers, vehicles or the public into newly disturbed areas. For certain resources such as recreation and visual quality these impacts would be significant and considered irreversible and irretrievable commitments of those resources. Overall, the cumulative and secondary impacts associated with DPV #2 would affect the future management of the Refuge and its resources.

In consideration of all impacts associated with DPV #2, as well as the proponent and applicant proposed mitigation measures, the Refuge Manager has determined that the proposed use, construction, and operation of DPV #2, would materially interfere with or detract from Refuge purposes, goals, and management actions, and would impede fulfillment of the NWRS mission and goals and purposes. In addition, the Service has determined that certain effects to the Refuge simply cannot be mitigated to the point where they would be compatible. Therefore, the use is deemed incompatible and is eliminated from further consideration.

**Signature:** Refuge Manager J. Paul Carver 3/1/07
(Signature and Date)

**Concurrence:** Regional Chief Chris Nolan 3-5-07
(Signature and Date)

**Mandatory 10- or 15-year Re-Evaluation Date:** None

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Attachment #1

# ISSUE MATRIX FOR DRAFT COMPATIBILITY DETERMINATION
# SOUTHERN CALIFORNIA EDISON-DEVERS PALO VERDE #2

| # | NAME | ADDRESS or EMAIL | Date RCVD | ISSUES | N | P | AGENCY RESPONSE |
|---|---|---|---|---|---|---|---|
| 1 | Peter Bengston | 1280 E. Paseo Pavon<br>Yuma, AZ 85718 | 12/3/06 | 1. Reduction of quality and quantity of habitats on Kofa NWR (Refuge). 2. Negative effects on bighorn sheep during lambing period. 3. Negative impacts on reptiles. 4. Negative impacts on migratory birds. 5. Destruction of pristine desert landscape. 6. Project would diminish recreational value of the Refuge. 6. Irreparable and unmitigable visual impacts. | | X | Comments consistent with the draft CD. No further action required. |
| 2 | Mark D. Eberle | Mark.D.Eberle@nap 02.usace.army.mil | 12/5/06 | 1. Reduction of quality and quantity of habitats on the Refuge. | | X | Comments consistent with the draft CD. No further action required. |
| 3 | Robert A. Witzeman | Maricopa Audubon Society<br>4619 E Arcadia Lane<br>Phoenix, AZ 85018<br>witzeman@cox.net | 12/3/06 | 1. Reduction of quality and quantity of habitats on the Refuge. 2. Negative effects on bighorn sheep during lambing period. 3. Destruction of pristine desert landscape. 4. Project would diminish recreational value of the Refuge. 5. Irreparable and unmitigable visual impacts. | | X | Comments consistent with the draft CD. No further action required. |
| 4 | Thomas E. Fox | yumatom@sprynet.com | 12/4/06 | 1. Do not allow proposed powerline through Kofa NWR (Refuge). | | X | Comments consistent with the draft CD. No further action required. |
| 5 | Donald Begalke | lakeharquahala@yahoo.com | 12/2/06 | 1. Reduction of quality and quantity of habitats on the Refuge. 2. Notes that DPV #1 impacts "were somewhat monstrous and terribly industrial-neither feeling should exist when in a wildlife refuge." 3. Reduction in the quality of the "Refuge" experience. 4. Irreparable and unmitigable visual impacts. | | X | Comments consistent with the draft CD. No further action required. |
| 6 | Roy M. Emrick | rmemrick@cox.net | 12/9/06 | 1. Reduction of quality and quantity of habitats on the Refuge. 2. Negative effects on bighorn sheep during lambing period. 3. Destruction of pristine desert landscape. 4. Irreparable and unmitigable visual impacts. 5. Project would diminish recreational value of the Refuge. | | X | Comments consistent with the draft CD. No further action required. |

*Note: N=comments do not support draft CD; P=comments support draft CD

# ISSUE MATRIX FOR DRAFT COMPATIBILITY DETERMINATION
# SOUTHERN CALIFORNIA EDISON-DEVERS PALO VERDE #2

| # | NAME | ADDRESS or EMAIL | Date RCVD | ISSUES | N | P | AGENCY RESPONSE |
|---|---|---|---|---|---|---|---|
| 7 | Margery Leach | 2609 W. Southern Ave. #338<br>Yuma, AZ 85282-4234 | 12/11/06 | 1. Reduction of quality and quantity of habitats on the Refuge. 2. Irreparable and unmitigable visual impacts. | | X | Comments consistent with the draft CD. No further action required. |
| 8 | Robert Herdliska | 2631 W. Prato Way<br>Tucson, AZ 85741 | 12/13/06 | 1. Reduction of quality and quantity of habitats on the Refuge. 2. Negative effects on bighorn sheep. 3. Negative impacts on reptiles. 4. Negative impacts on migratory birds. 5. Destruction of pristine desert landscape. 6. Irreparable and unmitigable visual impacts. 7. Project would diminish recreational value of the Refuge. | | X | Comments consistent with the draft CD. No further action required. |
| 9 | Margaret L. Thomas | 1084 Paseo Guebabi<br>Rio Rico, AZ 85648 | 12/10/06 | 1. Reduction of quality and quantity of habitats on the Refuge. 2. Negative effects on bighorn sheep. 3. Negative impacts on reptiles. 4. Negative impacts on migratory birds. 5. Destruction of pristine desert landscape. 6. Irreparable and unmitigable visual impacts. 7. Project would diminish recreational value of the Refuge. | | X | Comments consistent with the draft CD. No further action required. |
| 10 | John Alcock | 75 E. Loyola Drive<br>Tempe, AZ 85282 | 12/11/06 | 1. Reduction of quality and quantity of habitats on the Refuge. 2. Negative effects on bighorn sheep. 3. Negative impacts on reptiles. 4. Destruction of pristine desert landscape. 5. Irreparable and unmitigable visual impacts. 6. Project would diminish recreational value of the Refuge. | | X | Comments consistent with the draft CD. No further action required. |
| 11 | Gilbert G. Anaya | U.S. International Boundary and Waterway Commission (USIBWC)<br>The Commons<br>Building C, Suite 100<br>4171 N. Mesa Street<br>El Paso, TX 79902<br>http://www.ibwc.state.gov | 12/11/06 | "Based on the documents, there will be no effect to the USIBWC Yuma Field office projects and USIBWC responsibilities." | | X | Comments consistent with the draft CD. No further action required. |

*Note: N=comments do not support draft CD; P=comments support draft CD

# ISSUE MATRIX FOR DRAFT COMPATIBILITY DETERMINATION
# SOUTHERN CALIFORNIA EDISON-DEVERS PALO VERDE #2

| # | NAME | ADDRESS or EMAIL | Date RCVD | ISSUES | N | P | AGENCY RESPONSE |
|---|---|---|---|---|---|---|---|
| 12 | Bettina Bickel | 9218 N. 51st Dr.<br>Glendale, AZ 85302 | 12/18/06 | 1. Reduction of quality and quantity of habitats on the Refuge. 2. Negative effects on bighorn sheep during lambing season. 3. Negative impacts on reptiles. 4. Negative impacts on migratory birds. 5. Destruction of pristine desert landscape. 6. Irreparable and unmitigable visual impacts. 7. Project would diminish recreational value of the Refuge. | | X | Comments consistent with the draft CD. No further action required. |
| 13 | Eleanor Powell | 413 S. 21st Avenue<br>Yuma, AZ 85364 | 12/18/06 | 1. "As an artist I love to see nature raw, with little intrusion by we the people and our many inventions." 2. Negative effects on bighorn sheep. 3. Negative impacts on reptiles. 4. Negative impacts on migratory birds. | | X | Comments consistent with the draft CD. No further action required. |
| 14 | Eileen Mitchell | 2530 West Berridge Lane, #2<br>Phoenix, AZ 85017-2206 | 12/19/06 | 1. "...I agree with and support the U.S. Fish and Wildlife Service's determination that the DPV #2 is not compatible with our National Wildlife Refuge." | | X | Comments consistent with the draft CD. No further action required. |
| 15 | Phyllis Rowe | President Emeritus<br>Arizona Consumers Council<br>PO Box 1288<br>Phoenix, AZ 85001 | 12/22/06 | 1. Increase of energy costs to AZ residents. 2. Disturbance to the Wildlife Refuge. | X | | 1. SCE determined in its Cost Effectiveness Report that "...constructing DPV #2 was found to have a net negative impact of around $16 to $20 million per year to Arizona..." (SCE 2004:41). However, analysis of this issue is not within the scope of the CD, and therefore not included in the draft document. 2. Comments on disturbance to wildlife consistent with the draft CD. No further action required. |

*Note: N=comments do not support draft CD; P=comments support draft CD

Attachment #1

## ISSUE MATRIX FOR DRAFT COMPATIBILITY DETERMINATION
## SOUTHERN CALIFORNIA EDISON-DEVERS PALO VERDE #2

| # | NAME | ADDRESS or EMAIL | Date RCVD | ISSUES | N | P | AGENCY RESPONSE |
|---|---|---|---|---|---|---|---|
| 16 | Douglas R. Newton | 4812 South Fair Lane<br>Tempe, AZ 85282 | 12/22/06 | 1. Negative effects on bighorn sheep. 2. Negative impacts to archeological sites. | | X | 1. Comments on impacts to bighorn sheep consistent with draft CD. Not further action required. 2. Based on extensive surveys over the last 30 years it has been determined that the potential of impacts to archeological sites would be negligible. The Services' Regional Archaeologist is in agreement with these findings. The draft CD will be updated to also reflect these findings. |
| 17 | Ann L. Truschel | 1213 S. Johnson Road<br>Buckeye, AZ 85326<br>annlouisetruschel@yahoo.com | 12/29/06 | 1. Incompatible with Refuge's mission. 2. Negative impacts on bighorn sheep. 3. Negative impacts on tortoise habitat. 4. Reduction of quality and quantity of habitats on the Refuge. 5. Project would diminish recreational value of the Refuge. | | X | Comments consistent with the draft CD. No further action required. |
| 18 | Christine L. Oler | 207 W. Dahil Road<br>Tucson, AZ 85705<br>cloler@cox.net | 12/27/06 | 1. Incompatible with the Refuge's mission. 2. Reduction of quality and quantity of habitats on the Refuge. 3. Project would diminish recreational value of the Refuge. 4. Negative impacts on bighorn sheep. 5. Negative impacts on tortoise habitat. | | X | Comments consistent with the draft CD. No further action required. |
| 19 | Patricia L. Robert | 7447 N. 58th Place<br>Paradise Valley, AZ 85253 | 12/22/06 | 1. Incompatible with the Refuge's mission. 2. Negative effects on bighorn sheep during lambing season. 3. Negative impacts on bighorn sheep. 4. Negative impacts on tortoise habitat. 5. Potential impacts to animals crossing the roads. 6. Project would diminish recreational value of the Refuge. | | X | Comments consistent with the draft CD. No further action required. |
| 20 | Ryan Flory | 8444 E. Plaza Ave.<br>Scottsdale, AZ | 12/22/06 | 1. Incompatible with the Refuge's mission. 2. Negative effects on bighorn sheep during lambing season. 3. Negative impacts on bighorn sheep. 4. Negative impacts on tortoise habitat. 5. Potential impacts to animals crossing the roads. 6. Project would diminish recreational value of the Refuge. | | X | Comments consistent with the draft CD. No further action required. |

*Note: N=comments do not support draft CD; P=comments support draft CD

Attachment #1

## ISSUE MATRIX FOR DRAFT COMPATIBILITY DETERMINATION
## SOUTHERN CALIFORNIA EDISON-DEVERS PALO VERDE #2

| # | NAME | ADDRESS or EMAIL | Date RCVD | ISSUES | N | P | AGENCY RESPONSE |
|---|---|---|---|---|---|---|---|
| 21 | June P. Payne | 4733 E. Cambridge Ave.<br>Phoenix, AZ 85008-1507 | 12/26/06 | 1. Negative impacts to vegetation. 2. Negative effects on bighorn sheep. 3. Negative impacts on reptiles. 4. Negative impacts to paleontological resources. 5. Incompatible with the Refuge's mission. | | X | 1, 2, 3, and 5. Comments consistent with draft CD. No further action required. 4. Based on extensive surveys over the last 30 years it has been determined that the potential of impacts to archeological sites would be negligible. The Services' Regional Archaeologist is in agreement with these findings and the draft CD will be updated accordingly. |
| 22 | Tyler Kokjohn | 4040 W. El Cortez Trail<br>Glendale, AZ 85310<br>tkokjo@midwestern.edu | 12/22/06 | 1. Reduction of quality and quantity of habitats on the Refuge. 2. Incompatible with Refuge's mission. | | X | Comments consistent with the draft CD. No further action required. |
| 23 | Cassandra Carmichael | National Council of Churches<br>Washington Office<br>110 Maryland Ave, NE, Suite 108<br>Washington, DC 20002 | 12/28/06 | 1. Incompatible with the Refuge's mission. | | X | Comments consistent with the draft CD. No further action required. |
| 24 | Don & June Hochberg | junedonh@yahoo.com | 12/24/06 | 1. Loss of resources. | | X | Comments consistent with the draft CD. No further action required. |
| 25 | Cecilia Laspisa | 656 N. Sunstream Lane<br>Tucson, AZ 85748 | 12/22/06 | 1. Incompatible with the Refuge's mission. 2. Reduction of quality and quantity of habitats on the Refuge. 3. Project would diminish recreational value of the Refuge. 4. Negative impacts on bighorn sheep. 5. Negative impacts on tortoise habitat. | | X | Comments consistent with the draft CD. No further action required. |

*Note: N=comments do not support draft CD; P=comments support draft CD

## ISSUE MATRIX FOR DRAFT COMPATIBILITY DETERMINATION
## SOUTHERN CALIFORNIA EDISON-DEVERS PALO VERDE #2

| # | NAME | ADDRESS or EMAIL | Date RCVD | ISSUES | N | P | AGENCY RESPONSE |
|---|---|---|---|---|---|---|---|
| 26 | Frank Welsh | welshfj@yahoo.com | 12/26/06 | 1. "It's hard to believe that we would send our power to CA while they send their people here." | | X | The FEIS outlines that the Proposed Project will produce an economic benefit to California consumers (not Arizona consumers) of only $0.61 cents per MWh (p.A-14). The economic analysis was conducted under the assumption that the benefits of accessing Palo Verde generation in the southwest area will continue beyond 2012 (SCE 2004:41). Also, SCE determined in its Cost Effectiveness Report that "...constructing DPV #2 was found to have a net negative impact of around $16 to $20 million per year to Arizona..." (SCE 2004:41). However, analysis of this issue is beyond the scope of the CD, therefore no further action is required. |
| 27 | Patricia Kutney & Lawrence Sawyer | pamkutney1562@cox.net | 12/24/06 | 1. Negative impacts on wildlife. 2. Negative impacts on vegetation. | | X | Comments consistent with the draft CD. No further action required. |
| 28 | TW Kreuser | azkreuser2@cox.net | 12/24/06 | 1. "Keep it wild." | | X | Comments consistent with the draft CD. No further action required. |
| 29 | Patricia Kenyon | 8528 S. Shannon Way Yuma, AZ 85365-9509 | 12/27/06 | 1. Negative impacts on vegetation. 2. Negative impacts on wildlife. | | X | Comments consistent with the draft CD. No further action required. |
| 30 | Theresa Johnson | ThrJohn7@aol.com | 12/28/06 | 1. Incompatible with the Refuge's mission. | | X | Comments consistent with the draft CD. No further action required. |
| 31 | Rudy Dankwort | 8121 N. 8th Ave. Phoenix, AZ 85021 | 12/24/06 | 1. Negative impacts on bighorn sheep. 2. Negative impacts on wildlife. | | X | Comments consistent with the draft CD. No further action required. |
| 32 | Lon Stewart | 102 E. Kaler Drive Phoenix, AZ 85020 | 12/22/06 | 1. Negative impacts on bighorn sheep. 2. Negative impact on desert tortoise. 3. Negative impacts on vegetation. 4. Project would diminish recreational value of the Refuge. | | X | Comments consistent with the draft CD. No further action required. |

*Note: N=comments do not support draft CD; P=comments support draft CD

Attachment #1

# ISSUE MATRIX FOR DRAFT COMPATIBILITY DETERMINATION
# SOUTHERN CALIFORNIA EDISON-DEVERS PALO VERDE #2

| # | NAME | ADDRESS or EMAIL | Date RCVD | ISSUES | N | P | AGENCY RESPONSE |
|---|---|---|---|---|---|---|---|
| 33 | Dian M. Grueneich | Commissioner<br>California Public Utilities Commission<br>505 Van Ness Avenue<br>San Francisco, CA 94102 | 12/22/06 | 1. The route through the Refuge has been determined to be the environmentally preferred route. 2. DPV #2 is a critical addition to California and regional transmission infrastructure. 3. The Refuge only recently indicated that there was a problem with siting DPV #2 in the same corridor as DPV #1. 4. Alternative routes around the Refuge are not environmentally preferred and will unnecessarily delay the construction of DPV #2. | X | | 1. The Service was not a cooperating agency in BLM's FEIS. Also, the BLM is not responsible for the stewardship of the Refuge. Therefore, BLM's finding that the installation of a 500kV powerline across the Refuge is "environmentally preferred" does not take into account the mission of the Service as it applies to the Refuge and the NWRS. Furthermore, "unless otherwise provided for in law or other legally binding directive, permitting uses of national wildlife refuges is a determination vested by law in the Service," not other Federal and/or state agencies. 65 Fed. Reg. 62484, §2.11(A)(3). 2. The Final Environmental Impact Statement states "No new generation or major transmission facilities would be required if the DVP2 project is not constructed" (p. C-56); and also that "...DVP #2 is primarily driven by SCE's desire to reduce energy costs to California customers, not by a need for improved reliability" (p. C-53). The reported "critical" nature of DPV#2 does not automatically lead USFWS to conclude that DPV #2 is compatible with Refuge purposes. The USFWS position is that other alternative approaches (e.g., wind generation) and routes provided in the FEIS are feasible and should have been evaluated in more detail. 3. The Service indicated in its comments on the FEIS dated August 18, 2006, that the No Project Alternative was preferred by the Refuge. 4. The Service did not have any input into determining the "Environmentally Preferred" route. The I-10 corridor north of the Refuge already contains gas pipelines and has been targeted for utility development. As of December 19, 2006, it was included in the draft location for DOE's West Wide Energy Corridor. Should development proceed in that corridor, then the Refuge would no longer be the environmentally preferred alternative. The Service agrees with the assessment that the selection of an alternative route will add time to initiation and completion of the project. |

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# ISSUE MATRIX FOR DRAFT COMPATIBILITY DETERMINATION
# SOUTHERN CALIFORNIA EDISON-DEVERS PALO VERDE #2

| # | NAME | ADDRESS or EMAIL | Date RCVD | ISSUES | N | P | AGENCY RESPONSE |
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| 34 | Gail Acheson | *Bureau of Land Management*<br>Palm Springs-South Coast Field Office<br>690 W. Garnet Ave.<br>PO Box 581260<br>North Palm Springs, CA 92258-1260<br>(760)251-4800 | 12/22/06 | 1. Installation of DPV #2 along side of DPV #1 will allow use of existing access roads. 2. Use of the Administrative Final EIR/EIS to summarize impacts and mitigation measures is not appropriate. 3. Construction impacts on native plants were found to be potentially significant. Mitigation measures will lower the impacts. 4. Introduction of non-native plant species along travel corridors and within the Right-of-Way(ROW). Mitigation measures will lower the impact. 5. Negative impacts on reptile habitat. Mitigation measures will lower the impacts. 6. Negative impacts on bighorn sheep. Mitigation measures will lower the impacts. | X | | 1. The Proposed Project creates new spur roads, extends existing spur roads, and impacts vegetation inside the ROW on the Refuge. Even with mitigation measures, habitat for reptile and small mammals will be destroyed or their habitat fragmented if the project is implemented. Construction activity on previously undisturbed areas within the ROW would also cause direct mortality to these species when the operation of vehicles and equipment crush them in their burrows. Direct mortality could also occur to those animals that attempt to scavenge reptile and small mammals killed during construction activities, although the disturbance itself may keep them at a safe distance and out of harms way. Indirect impacts might occur to these predatory species from a reduced prey base. 2. The Service has used the BLM's FEIS to supplement the "sound professional judgment" of the Refuge Manager in determining whether or not the proposed use meets the purposes of the Refuge and the mission of the NWRS. The Service also believes that it is appropriate to reference the mitigation measures implemented in the FEIS in the CD as these measures are used to determine the projected level of impact of the activity or action and its significance to the resource under consideration. 3. Mitigation measures proposed in the FEIS focus on the development of a transplanting plan. The Service disagrees that transplanting native plants where ground disturbing activities have occurred reduces the impact to vegetation to a less than significant level. Experience has shown that desert revegetation is extremely difficult to recover. Transplanting sensitive plant species will reduce direct mortality from construction activities but there is no practical mitigation available to restore the proper functioning of the Sonoran Desert vegetation community. Visible scars remain on the Refuge from pipeline installation from the 1950s-1970s and from the construction of DPV #1. The outcomes are expected to be similar for DPV #2. 4. Invasive plant species remain a problem decades after completion of a project, not only from inadvertent introduction or spread due to construction activities but from introduction or spread from increased public use of roads constructed or upgraded for the project. Seed introduced from either cause can remain viable for years. The Refuge is still dealing with populations of Mediterranean grass and Sahara mustard along the pipeline road primarily brought in by vehicle travel along this route. Mitigation is never long-term or widespread enough to adequately address the invasive species issue; therefore it remains a significant issue for the Refuge. 5. Mitigation measures will not stop reptile habitat fragmentation, cover destruction, and population isolation because direct ground disturbance from construction activities would remain an issue at the 85 tower sites and where spur roads were extended and temporary soil and vegetation damage within the ROW cannot be adequately restored to its full habitat function. Direct mortality of reptiles and small mammals being crushed in their burrows by construction activity cannot be avoided. 6. DPV #1 precluded normal ram crossings during construction. Deterrence of ram crossings during construction could impact breeding, an unwarranted risk because the herd is already in decline. If construction were to take place outside the critical lambing and rutting season, construction would be limited to the months of May, June, and July. SCE has not indicated a willingness to limit construction activities to avoid all critical lambing and breeding periods for desert bighorn sheep. |

*Note: N=comments do not support draft CD; P=comments support draft CD

## ISSUE MATRIX FOR DRAFT COMPATIBILITY DETERMINATION
## SOUTHERN CALIFORNIA EDISON-DEVERS PALO VERDE #2

| # | NAME | ADDRESS or EMAIL | Date RCVD | ISSUES | N | P | AGENCY RESPONSE |
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| 34 | Gail Acheson | Bureau of Land Management<br>Palm Springs-South Coast Field Office<br>690 W. Garnet Ave.<br>PO Box 581260<br>North Palm Springs, CA 92258-1260<br>(760)251-4800 | 12/22/06 | 7. Negative impact on bighorn sheep during lambing. Mitigation measures will lower the impact. 8. Negative impacts to burrowing owls and sensitive birds. Mitigation measures will lower the impact. 9. Negative impacts on desert tortoise and tortoise habitat. Mitigation measures will lower the impact. 10. Project would diminish recreational value of the Refuge. Mitigation measures will lower the impact. 11. Irreparable and unmitigable visual impacts. Mitigation measures will lower the impacts. 12. Negative impacts to archeological sites. Mitigation measures will lower the impact. | X | | 7. Because of the proximity of DPV #2 to desert bighorn sheep lambing areas within the Refuge, impacts to the sheep during breeding and lambing periods would be potentially significant. In spite of the mitigation measures proposed in the FEIS and Applicant Proposed Measures (APMs), increased vehicular traffic on access and spur roads, the operation of heavy equipment, and other human disturbance in the vicinity of lambing areas could result in ewes to moving out of adjacent lambing areas, lower reproductive success, and possibly direct mortality of lambs from abandonment. The Refuge's desert bighorn sheep herd is one of the largest in the state and vital source of genetic diversity, both through emigration to nearby mountain ranges and through transplants throughout the southwest. Lambing is the most critical life history stages for bighorn sheep and with the Refuge's population in decline (a reduction of over 220 animals in the last three years) any losses caused by DPV #2 would be a significant concern for the Refuge and would impact its efforts to recover the population. Finally, recent surveys have indicated that the lamb:ewe ratio is consistently low, emphasizing the importance of undisturbed lambing areas for long-term maintenance of the herd. There is insufficient data on impacts of DPV#1 or the combination of DPV #1 and #2 to lambing. Restricting construction to outside of November-April would partially mitigate impacts to lambing, as long as construction was not during the critical breeding season (August-October). 8. There are no records of burrowing owls on the Refuge, although they may occur within suitable habitat. The proposed mitigation is considered adequate at this time. The CD will be updated to reflect this information. 9. Desert tortoises have been documented in the Livingston Hills and New Water Mountains. There is insufficient data on effects of DPV#1 and cumulative effects of DPV #1 and #2 on this population, but there is the potential for habitat fragmentation and population isolation. Tortoises occasionally move long distances of several miles and the habitat fragmentation caused by DPV #2 or the cumulative impacts of DPV #1 and #2 may preclude these movements. 10. The FEIS clearly outlines that there would be significant impacts to recreation from DPV#2. Mitigation measures implemented during construction would partially lower impacts during the summer (May – September 2008) when visitation is low. Impacts would remain significant for the recreational uses listed when construction overlaps with the Refuge's high visitation season (October – December 2008). The increased industrialization of the area degrading the quality of visual resources and noise during the operation of DPV #2 would be significant and unmitigable. It is important to note that the Service cannot accept compensatory mitigation (e.g., land acquisition or land restoration as proposed in the FEIS) to eliminate these impacts (603 FW2.11C). 11. The Service recognizes that visual impacts during construction are identified as Class III (less than significant). The Service does not disagree with this assessment for the summer months (May – September 2008), but believes that impacts to these resources during the high visitation period (October - December 2008) would be significant. Impacts during operation of DPV #2 are clearly significant based on the increased industrialization of the area and degradation of visual resources. Mitigation measures are proposed to reduce these impacts, but the Service believes that they are insufficient and impacts would remain significant for the life of the project. 12. Based on extensive surveys over the last 30 years it has been determined that the probability of impacts to archeological sites is negligible. The Services' Regional Archaeologist is in agreement with these findings. The draft CD will be updated to also reflect these findings. |

*Note: N=comments do not support draft CD; P=comments support draft CD

## ISSUE MATRIX FOR DRAFT COMPATIBILITY DETERMINATION
## SOUTHERN CALIFORNIA EDISON-DEVERS PALO VERDE #2

| # | NAME | ADDRESS or EMAIL | Date RCVD | ISSUES | N | P | AGENCY RESPONSE |
|---|---|---|---|---|---|---|---|
| 34 | Gail Acheson | Bureau of Land Management<br>Palm Springs-South Coast Field Office<br>690 W. Garnet Ave.<br>PO Box 581260<br>North Palm Springs, CA 92258-1260<br>(760)251-4800 | 12/22/06 | 13. Magnetic field interference with electronic equipment. Mitigation measures will lower the impact. 14. Potential impacts to birds from transmission line collisions. Mitigation measures will lower the impact. 15. Increased public use of unauthorized roads. Mitigation measures will lower the impact. 16. Cumulative impacts to biological resources. Mitigation measures will lower the impact. 17. Mitigation measures in the Final EIR/EIS would be adopted by the CPUC and BLM. | X | | 13. SCE is attempting to resolve potential radio interference from DPV#1. During January 2007, SCE conducted field studies of the impact of DPV #1 on radio communications. Although no interference was recorded, SCE Radio Technicians stated that further study would be required to fully assess the potential impact of DPV #1 (as well as DPV #2) on radio communications. Emphasis will need to be placed on radio communications during the summer months when the coronal noise and potential for interference is likely to be at its highest level. Mitigation measures may reduce the impact of radio interference on the Refuge's communication system, but these measures are expected to be ineffective for radio telemetry. Therefore, potential impacts to radio tracking activities (e.g., desert bighorn sheep, and mountain lions) from DPV #1 and #2 would be significant and unmitigable. Radio interference would limit the Refuge's biologists' ability to conduct population studies with radio collars, which is a critical element of research and management to reverse the current sheep decline. The Service understands that there is conflicting scientific information on the effects of EMF. Refuge staff working in the vicinity of DPV #1 or DPV #2 should not be at a significant risk of exposure to EMF; however any measures taken by SCE to reduce EMF associated risks would be appropriate and supported. 14. Mitigation measures may lower but will not eliminate adverse impacts from bird strikes. "....The primary source of collision mortality among birds...are the small, incremental losses associated with the millions of kilometers of power and communication lines and the billions of glass windows throughout the country" (Review of Avian Mortality Due to Collisions with Manmade Structures, Michael L. Avery, 1979). A mortality rate of 1-2.5 birds per year, as suggested by some upland studies on power lines, would suggest an annual avian mortality of around 97 birds per year on the Refuge. Regardless of the magnitude of avian kill from collisions, any avian mortality is a direct violation of the Migratory Bird Treaty Act and must be addressed. 15. There is no effective way to mitigate for increased public use of unauthorized roads - gating is ineffective in open desert environments and permanent monitoring is impractical. Unauthorized vehicle use causes increased habitat fragmentation, damage to desert pavement (i.e., sparsely vegetated desert flatland totally covered with a single layer of desert-varnished rocks) and vegetation, and increases spread of invasive plants. 16. The cumulative impacts of DPV #1 and DPV #2 are *unknown. There is insufficient data on impacts of DPV #1 on species other than bighorn sheep and no baseline* data to conduct a thorough and adequate analysis of the impacts of DPV #2. There is no data available from other studies on the impacts of 2 powerlines operating together on any species. The lack of baseline documentation of negative impacts does not imply that cumulative impacts did not occur with DPV #1, or that additional significant cumulative impacts would not occur with the construction and operation of DPV #2. The obvious lack of data calls for a conservative assessment of the potential impacts. Cumulative impacts must also be considered in regard to other past and present disturbing actions on the Refuge, including the existing ROWs for natural gas pipelines, military overflights, mining, and increased damage from illegal use of OHVs on unauthorized ROW roads. 17. Although SCE has pledged to reduce impacts to "the extent practicable" through mitigation measures, the Service has determined that those impacts which remain cannot be mitigated to a level that the project would be compatible with Refuge purposes, nor is the project consistent with the Service's mission and goals, or pertinent agency policies. |

*Note: N=comments do not support draft CD; P=comments support draft CD

# ISSUE MATRIX FOR DRAFT COMPATIBILITY DETERMINATION
# SOUTHERN CALIFORNIA EDISON-DEVERS PALO VERDE #2

| # | NAME | ADDRESS or EMAIL | Date RCVD | ISSUES | N | P | AGENCY RESPONSE |
|---|---|---|---|---|---|---|---|
| 34 | Gail Acheson | Bureau of Land Management<br>Palm Springs-South Coast Field Office<br>690 W. Garnet Ave.<br>PO Box 581260<br>North Palm Springs, CA 92258-1260<br>(760)251-4800 | 12/22/06 | 18. The BLM considered three alternative routes to avoid impacts to the Refuge. Each of these routes may not be feasible as they would create a new corridor with associated ground disturbance, new access routes, and disruption of recreation in other visitor areas, and reduction of various scenic views. 19. The CD incorrectly references the construction timeframe for the project. 20. The Service's CD incorrectly states that the project is being proposed on the Refuge to avoid impacts to lands administered by the BLM. 21. Noise will be an issue during the construction and operation of the powerline. Mitigation measures will lower impacts. 22. Air Quality impacts will be significant during construction of DPV #2. Mitigation measures will lower these impacts. 23. Methods will be employed to reduce EMF associated with DPV #2. 24. In the FEIS, impacts to wilderness were significant and unmitigable. BLM acknowledges the Service's position on wilderness in the draft CD, which does not support the findings of the FEIS, except where the ROW may be expanded beyond 130 feet. The BLM/CPUC will require additional environmental analysis, if the ROW is expanded beyond 130 feet. | X | | 18. *The Service did not have a role in determining of the "Environmentally Preferred' route for DPV #2. The* Service was not a cooperating agency in BLM's FEIS. BLM is not responsible for the stewardship of the Refuge. Therefore, BLM's finding that the installation of a 500KV powerline across the Refuge is "preferred" does not take into account the mission of the Service as it applies to the Refuge and the National Wildlife Refuge System (NWRS). Furthermore, "unless otherwise provided for in law or other legally binding directive, permitting uses of national wildlife refuges is a determination vested by law in the Service," not other Federal and/or state agencies. 65 Fed. Reg. 62484, §2.11(A)(3). If the Service had been a cooperating agency in the project, it would not have recommended selection of the Refuge segment as part of the "Environmentally Preferred" alternative because of the direct impact to wildlife and their habitats, the purposes for which that area was established and managed, and the inconsistencies of the project with the agency's legal and policy mandates. In any case, many of the *environmental concerns identified for the alternative routes would be irrelevant if the area north of the Refuge is* targeted for the West Wide Energy Corridor. As of December 19, 2006, the I-10 corridor north of the Refuge was the draft location for the West Wide Energy Corridor and would be a better route for DPV #2 because it would eliminate the significant and adverse impacts to the Refuge, and any adverse effects would be less than those already posed by the interstate highway. 19. The Service was incorrect in describing the construction timeframe for the project (24 month total). Although this is correct for completion of the entire project, the Refuge segment would require much less time to complete (May through December 2008). The draft CD will be corrected to reflect this information. 20. The Service incorrectly stated that the "environmentally preferred alternative" was proposed on the Refuge to avoid impacts to BLM lands. It also recognizes that the vast majority of lands impacted by the project in California and Arizona are under the jurisdiction of the BLM. The draft CD will be modified to reflect that the route across the Refuge was selected to allow the use of existing access roads and would avoid creation of a second major transmission corridor through the region. 21. The Service believes, as explained in greater detail in sections of the final compatibility determination, that noise will impact wildlife and recreational activities on the Refuge during construction and the subsequent operation of the project. Mitigation measures would not reduce these impacts to a less than significant level during a portion of the construction period (October – December 2008), or during its operation for the life of the project (50 + years). A 3 dBA increase would be double the noise that is associated with the operation of DPV #1. DPV #2 would result in a coronal noise increase up to 5 dBA once constructed. 22. The Service agrees that mitigation measures for DPV #2 would reduce air quality issues to a less than significant level, but adverse impacts would remain. These impacts are from particulate matter emissions which exceed Arizona Department of Environmental Quality Standards (PM 10 Emissions) and are for the most part generated by vehicle travel on access routes and heavy equipment at construction sites. 23. The Service understands that there is conflicting scientific information on the effects of EMF. Refuge staff working in the vicinity of DPV #1 or DPV #2 should not be at a significant risk of exposure to EMF; however any measures taken by SCE to reduce EMF associated risks would be appropriate and supported. 24. The Service's position on the impacts to wilderness is unchanged because the project has no direct affect on these resources. DPV #2 as proposed is outside wilderness, so these resources are unaffected. If the ROW is expanded beyond 130 feet, the Service agrees with the BLM statement that an additional environmental analysis would be required. |

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# ISSUE MATRIX FOR DRAFT COMPATIBILITY DETERMINATION
# SOUTHERN CALIFORNIA EDISON-DEVERS PALO VERDE #2

| # | NAME | ADDRESS or EMAIL | Date RCVD | ISSUES | N | P | AGENCY RESPONSE |
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| 35 | Nino J. Mascolo | Southern California Edison<br>2244 Walnut Grove Ave.<br>Rosemead, CA 91770<br>(626)302-4459<br>nino.mascolo@sce.com | 12/22/06 | 1. Existing 1989 CD was still valid, therefore a new CD is not needed. 2. Project will not materially interfere with conservation management of bighorn sheep, birds, and reptiles. | X | | 1. The 1989 CD is no longer valid. The National Wildlife Refuge Administration Act of 1966 authorizes the Service to use the 1989 CD, however, the Service will re-evaluate CDs for all existing uses other than wildlife-dependent uses when conditions under which the use is permitted change significantly, or if there is significant new information regarding the effects of the use. 50 CFR §25.21. In fact, the Service can even terminate or modify an existing use when the Service determines that such a use is not compatible. "A Refuge Manager always may re-evaluate the compatibility of a use at any time." 65 Fed. Reg. 62484, §2.11(H). The Service has issued a new CD for the following reasons: a) Prior to the issuance of the 1989 CD, the Service's administrative record shows that the issue of compatibility was addressed numerous times. On nine occasions Service personnel either determined that DPV #2 was incompatible with Refuge purposes or reaffirmed this position. This evidence significantly undermines the scant justification provided in the 1989 determination by the Regional Director that the installation of DPV #2 was compatible with the mission of the Refuge; b) Prior to the issuance of a permit for DPV #1, on five occasions Service personnel either determined that DPV #1 was incompatible with Refuge purposes or reaffirmed this position; c) The Service's Final Compatibility Policy Pursuant to the National Wildlife Refuge System Improvement Act of 1997 ("Policy") became effective on November 17, 2000. 65 Fed. Reg. 62484, 603 FW 2. The promulgation of this policy occurred eleven years after the CD for DPV #2. The Policy described the process for determining whether or not a use of a national wildlife refuge was a compatible use. The Service should use the standards set out in the Policy as opposed to relying upon CDs issued prior to the formulation of the Policy; d) the proposed use in conflict with other recently issued policies including 601 FW3 Biological Integrity, Diversity and Environmental Health, 601FW 1 NWRS Mission, Goals and Refuge Purposes, 605 FW 1 Wildlife Dependent Recreation, and 603 FW1 Appropriate Refuge Uses (provided there is no existing right for the use); and e) The use is in direct conflict with the Refuge's overall Management Strategy as addressed in the 1996 Kofa National Wildlife Refuge and Wilderness and New Waters Mountains Wilderness Interagency Management Plan and Environmental Assessment (p. 29) and specifically Objective 2 (Wildlife and Habitat Management) (P. 32) and Objective 3 (Recreation, Legal Access and Public Information). 2. 603 FW 2.E provides "If information available to the Refuge Manager is insufficient to document that a proposed use is compatible, then the Refuge Manager would be unable to make an affirmative finding of compatibility". DPV #1 was shown to preclude normal ram corridor crossing during construction. There is insufficient information to declare that no impacts occurred from DPV#1 for other species or that no impacts would occur from operation of DPV #1 and #2. Based on the information presented in the FEIS, the Service believes that sheep, small mammals, birds and reptiles will be affected by DPV #2, either during construction or operation of the project. |

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## ISSUE MATRIX FOR DRAFT COMPATIBILITY DETERMINATION
## SOUTHERN CALIFORNIA EDISON-DEVERS PALO VERDE #2

| # | NAME | ADDRESS or EMAIL | Date RCVD | ISSUES | N | P | AGENCY RESPONSE |
|---|---|---|---|---|---|---|---|
| 35 | Nino J. Mascolo | Southern California Edison<br>2244 Walnut Grove Ave.<br>Rosemead, CA 91770<br>(626)302-4459<br>nino.mascolo@sce.com | 12/22/06 | 3. Current DPV #1 line does not interfere with bighorn sheep movements or lambing on the Refuge. 4. No sensitive reptiles were found in the project area. 5. DPV #1 has not been shown to cause any significant bird mortality due to collision. | X | | 3. SCE's account of the construction impacts to ram crossings is inaccurate. In Smith et al.'s (1986) DPV #1 study, more than one ram was affected. The study found that transmission line construction activities precluded normal ram crossing between the New Water Mountains, Kofa Mountains and Livingston Hills. Preventing ram crossings for even the short construction period could be detrimental to the herd by interrupting breeding activities during the late summer and fall. Ultimately, this disruption could have long-term impacts on a population already in decline and affect current recovery efforts on the Refuge. The findings about the Dome Rock herd regarding the impacts of the operation of DPV #1 are inapplicable to the Refuge herd because escape terrain is immediately available on both sides of Copper Bottom Pass, which is far more favorable to crossing than the conditions that exist on the Refuge. SCE has relied on this information in its analysis of the potential impacts on the Refuge. The Refuge has never indicated that there is evidence that the operation of DPV #1 has precluded normal sheep crossings, but the operation of DPV#1 and #2 together could have this effect. Baseline data does not exist to accurately assess this issue with any certainly, so the Service must err on the side of caution when determining its significance on the Refuge's bighorn sheep herd. The FEIS indicates that the Proposed Project would be within 0.6 miles, not one mile, of the nearest lambing ground. No data specific to the powerline impacts on lambing were ever reported in the study of DPV #1. The study reported summary statistics for lambing but no analysis in regard to the powerline was performed. It is true that the data did not document any change in home range or unusual responses by ewes to the construction and operation of DPV#1, but there are no data to support SCE's other claims that there are no impacts to lambing areas. Given the recent decline of the bighorn herd, subjecting sheep to the noise and disturbance created by powerline construction would not be in the best interest of desert bighorn sheep conservation on the Refuge. 4. Desert tortoise, Gila monster, and rosy boa have all been found in the general vicinity of the project. The Refuge documented desert tortoise populations in the Livingston Hills and New Water Mountains (1.0 and 0.6 miles from DPV #2, respectively) in the 1990s. Tortoises occasionally move several miles and the impacts of the first powerline on these populations are undetermined. New tower sites, spur roads and ground disturbance may still cause habitat fragmentation and genetic isolation for small mammals and reptile. There are numerous species that could be affected by DPV #2. 5. There is no data on impacts of DPV #1 to migratory birds (e.g. neotropical migrants) on the Refuge. However, this does not indicate that no impacts have occurred following the project's completion in 1981. No studies were ever performed and carcasses of small birds that may have collided with towers or lines disappear quickly from scavenging and weathering in the desert environment. The cumulative impacts of DPV #1 and DPV #2 will likely cause greater impacts to migratory birds than DPV #1 alone. As SCE points out, evidence of conflicts between birds and 500kV lines is limited, likely because this kind of data is difficult to obtain. However, it is reasonable to assume that collision would occur and could adversely affect bird populations. |

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# SOUTHERN CALIFORNIA EDISON-DEVERS PALO VERDE #2

| # | NAME | ADDRESS or EMAIL | Date RCVD | ISSUES | N | P | AGENCY RESPONSE |
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| 35 | Nino J. Mascolo | Southern California Edison<br>2244 Walnut Grove Ave.<br>Rosemead, CA 91770<br>(626)302-4459<br>nino.mascolo@sce.com | 12/22/06 | 6. Alternative routes will cause more wildlife disturbance. 7. Mitigation measures will lower impacts to a less than significant level. 8. Draft CD addresses impacts not related to the purposes of the Refuge or the mission of the NWRS. The agency completed the CD outside its statutory authority. 9. DPV #2 is consistent with the Refuge & Wilderness and New Water Mountains wilderness interagency management plan and environmental assessment (Management Plan). | X | | 6. Laws, regulations, and policies applicable to CDs do not require the Service to analyze impacts to areas outside of the Refuge in making the determination of compatibility. The Service does not have the authority to make decisions regarding lands managed by other agencies. Also, the Service was not a cooperating agency in the process to determine the "Environmentally Preferred' Alternative. Many of the environmental concerns about alternative routes will be irrelevant if the area north of the Refuge is targeted for the West Wide Energy Corridor. The I-10 corridor north of the Refuge was the draft location for the West Wide Energy Corridor as of December 19, 2006. 7. Although SCE has pledged to reduce impacts to "the extent practicable" through mitigation measures, the Service has determined that those impacts which remain cannot be mitigated to a level that the project would be compatible with Refuge purposes, nor is the project consistent with the Service's mission and goals (601 FW 1), or pertinent agency policies such Biological Integrity, Diversity and Environmental Health (601 FW 3), Appropriate Uses (603 FW 1), or Wildlife Dependent Recreation (605 FW 1). 8. The Service considered all applicable legal and policy requirements in completing it CD for DPV #2, including 601 FW 1 NWRS Mission, Goals and Refuge Purposes, 601 FW 3 Biological Integrity, Diversity and Environmental Health, 605 FW 1 Wildlife Dependent Recreation, and 603 FW 1 Appropriate Refuge Uses. Inclusion of the above in a CD are clearly supported by the Service's policy on Compatibility (603 FW 2) and based in law, specifically the NWRS Administration Act of 1966 (16 U.S.C. §668dd-668ee), as amended. Other applicable laws that were considered in the preparation of this CD included the National Historic Preservation Act, 16 U.S.C. §470 et. seq., the Archaeological Resources Protection Act, 16 U.S.C. §470aa et. seq., and the Native American Graves Protection and Repatriation Act, 25 U.S.C. § 3001. 9. A Refuge Manager "should deny a proposed use without determining compatibility" if the proposed use conflicts with the goals or objectives in an approved refuge management plan (*e.g.*, comprehensive conservation plan, comprehensive management plan, master plan or step-down management plan)." 65 Fed. Reg. 62489, §2.10(D)(c). Through his analysis of DPV #2, the Refuge Manager has determined that the proposed use is in direct conflict with the Refuge's overall Management Strategy as addressed in the 1996 Kofa National Wildlife Refuge and Wilderness and New Waters Mountains Wilderness Interagency Management Plan and Environmental Assessment (p. 29), and specifically Objective 2 (Wildlife and Habitat Management) (P. 32), and Objective 3 (Recreation, Legal Access and Public Information) (P.35). |

*Note: N=comments do not support draft CD; P=comments support draft CD

## ISSUE MATRIX FOR DRAFT COMPATIBILITY DETERMINATION
## SOUTHERN CALIFORNIA EDISON-DEVERS PALO VERDE #2

| # | NAME | ADDRESS or EMAIL | Date RCVD | ISSUES | N | P | AGENCY RESPONSE |
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| 35 | Nino J. Mascolo | Southern California Edison<br>2244 Walnut Grove Ave.<br>Rosemead, CA 91770<br>(626)302-4459<br>nino.mascolo@sce.com | 12/22/06 | 10. Executive Order 13211 requires consideration of impacts federal decision on energy distribution. 11. Project impacts were not accurately characterized. 12. Project impacts must be based upon the existing environmental baseline. | X | | 10. The Service has considered the effects of this compatibility determination on energy distribution. The Service has held numerous meetings with SCE and the California Public Utilities Commission and reviewed numerous energy distribution documents that discuss energy distribution concerns if DPV #2 is found incompatible with the NWRS mission and Refuge purposes. The Final Environmental Impact Statement states "No new generation or major transmission facilities would be required if the DVP2 project is not constructed" (p. C-56); and also that "...DVP #2 is primarily driven by SCE's desire to reduce energy costs to California customers, not by a need for improved reliability" (p. C-53). The reported "critical" nature of DPV#2 does not automatically lead USFWS to conclude that DPV #2 is compatible with Refuge purposes. In and of itself, the Service's compatibility determination does not have a significant adverse effect on the supply, distribution, or use of energy. There are other alternatives to routing DPV #2 available to SCE. The drafting and issuance of the Service's CD has not had an adverse effect on the timeliness of the permitting process required by SCE because SCE must still receive permits and other grants of authority from other state and Federal agencies. As of the time of the issuance of the draft CD, SCE had still not received all requisite permits and grants of authority. In summary, we do not believe the CD is in conflict with Executive Order 13211. 11. Project impacts were accurately characterized in the CD. The Refuge Manager utilized the FEIS to summarize the impacts of the use and to supplement his "sound professional judgment" in determining whether or not the proposed use meets the mission and goals of the NWRS and Refuge purposes. The Refuge Manager will ensure that critical mitigation measures outlined in the FEIS are adequately referenced under each resource category in the final CD. 12. The Service considered the environmental baseline which already includes a powerline (DPV #1) crossing the Refuge. According to the Policy, "when considered separately, a use may not exceed the compatibility threshold, but when considered cumulatively in conjunction with other existing or planned uses, a use may exceed the compatibility threshold." The Service determined that an additional 500kV powerline running across the Refuge (DPV #2), through an area used by the American public for wildlife-dependent recreation, and through an area providing critical wildlife habitat for a nationally significant species such as desert bighorn sheep and other important desert-dwelling species in the Sonoran Desert Ecosystem, when taken in conjunction with DPV #1 and other industrial infrastructure, is incompatible with wildlife dependent recreation, which means it does nothing to enhance the American public's opportunity to develop an appreciation for fish and wildlife. "Compatible wildlife-dependent recreational uses (e.g. hunting, wildlife observation) are the priority general public uses of the [National Wildlife Refuge] System and shall receive priority consideration in Refuge planning and management." 16 U.S.C. §668dd(a)(3)(C). The importance of wildlife-dependent recreational use is evidenced in the numerous public comments to the draft compatibility determination that support the Service's draft decision that permitting DPV #2 will be incompatible with the NWRS mission and Refuge purposes. The addition of DPV #2 does nothing to ensure that the mission essential elements of biological integrity, diversity, and environmental health of the NWRS are maintained for the benefit of present and future generations of Americans. Furthermore, the construction of DPV #2 on the Refuge does not contribute to the conservation of the ecosystems of the United States because it destroys plant life, disturbs fragile soils, fragments wildlife habitats, causes additional noise, and more likely than not will harm wildlife. |

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# ISSUE MATRIX FOR DRAFT COMPATIBILITY DETERMINATION
# SOUTHERN CALIFORNIA EDISON-DEVERS PALO VERDE #2

| # | NAME | ADDRESS or EMAIL | Date RCVD | ISSUES | N | P | AGENCY RESPONSE |
|---|---|---|---|---|---|---|---|
| 35 | Nino J. Mascolo | Southern California Edison<br>2244 Walnut Grove Ave.<br>Rosemead, CA 91770<br>(626)302-4459<br>nino.mascolo@sce.com | 12/22/06 | 13. The FEIR/EIS conclude that no known National Register of Historic Places (NHRP) eligible cultural/historical sites of significance are within the Refuge Area of Potential Affect (APE). 14. Mitigation measures were not properly considered in determining compatibility. 15. The draft CD identified less than significant impacts that can be addressed in a ROW stipulation. 16. If a NEPA analysis were used, the service should have considered impacts to other alternative routes and properly evaluated cumulative impacts. 17. The potential impacts of DPV #2 are minor. 18. The appropriate use policy is irrelevant to the DPV #2 CD. 19. In reference to the Refuge's Comprehensive Management Plan, 50 CFR 29.21 is the guidance for right-of- ways outside wilderness and no additional guidance is required. | X | | 13. Based on extensive surveys over the last 30 years it has been determined that the probability of impacts to archeological sites is negligible. The Services' Regional Archaeologist is in agreement with these findings. The draft CD will be updated to reflect these findings. 14. Mitigation measures found in the FEIS were properly considered in this compatibility determination. The Service used the proponents analysis of impacts along with sound professional judgment to determine whether or not a particular mitigation measure, or group of measures would be 1) ineffective in reducing the impact, and therefore significant and/or potentially unmitigable; 2) effective in reducing the impact to a level less than significant, but still adverse; 3) effective in minimizing the impact to a level acceptable for management of the affected resource; or 4) effective in eliminating the impact to the resource altogether, and consequently no longer a concern to its management. The Service has used the BLM's FEIS to supplement the "sound professional judgment" of the Refuge Manager in determining whether or not the proposed use meets the purposes of the Refuge and the mission of the NWRS. The Service also believes that is also appropriate to reference the mitigation measures implemented in the CD as these measures were used to determine the projected level of impact of the activity or action and its significance to the resource under consideration.15. If the Service's current position on DPV #2 were reversed, and a right-of way permit issued for the project, then mitigation measures directed by the BLM/CPUC would be included in the Service's realty permit for the project (similar to DPV #1). 16. In 603 FW 2, the CD process does not require NEPA or the analysis of alternatives in its development. Alternative routes considered outside the Refuge in the FEIS are not required to be analyzed as part of the Refuge Manager's decision-making process. 17. The potential impacts of DPV #2 are not minor. The project would disturb approximately 100 acres of wildlife habitat , preclude normal bighorn sheep crossing during construction and further isolate populations, disturb bighorn sheep breeding activities during the breeding season, and disturb 5 Partners in Flight indicator species nesting and foraging in washes within the ROW. Ground disturbance could exacerbate invasive species problems along pipeline road and spur roads, and 85 additional towers and associated powerlines would further fragment, degrade and industrialize the landscape impacts, affecting the quality of recreation and visual resources. The greatest impact would be the cumulative *impacts on all the resources listed above from the construction and operation of DPV #2. The incremental affects* of the second powerline are anticipated to be significant and irretrievable commitments of Refuge resources. 18. The Appropriate Use Policy is not the basis of the Service's non-compatibility determination and it is relevant. The Service recognizes that rights-of-way will continue to be handled through the compatibility and ROW permit processes and not the Appropriate Use Policy. However, the Appropriate Use Policy clarifies the compatibility policy, and therefore may be used for those purposes. The Service agrees that the proposed use may not be found non-compatible based upon the Appropriate Use Policy alone. 19. The Service recognizes that 50 CFR 29.21 is the primary guidance for rights-of-way on Service lands. However, an integral part of considering any proposed ROW on Service lands is determining whether or not the use is compatible with Refuge purposes and the mission and goals of the NWRS. These can be prepared as stand-alone documents as in the case of DPV #2, or as part of larger planning effort (e.g., a Comprehensive Management Plan) for the Refuge. A CD is applicable for any new ROW and at the end of the ROW term. The Service will use the CD for periodic re-evaluations of (ROWs) to ensure compliance with the terms and conditions in the realty permit for the use. |

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# ISSUE MATRIX FOR DRAFT COMPATIBILITY DETERMINATION
# SOUTHERN CALIFORNIA EDISON-DEVERS PALO VERDE #2

| # | NAME | ADDRESS or EMAIL | Date RCVD | ISSUES | N | P | AGENCY RESPONSE |
|---|---|---|---|---|---|---|---|
| 35 | Nino J. Mascolo | Southern California Edison<br>2244 Walnut Grove Ave.<br>Rosemead, CA 91770<br>(626)302-4459<br>nino.mascolo@sce.com | 12/22/06 | 20. A broad-based analysis is inappropriate for a CD. 21. Congress intended to allow SCE_DPV #2. 22. The Schultz Hanford Area Transmission Line at Columbia NWR should be used as a model for DPV #2. 23. The Refuge Manager should consider the use of the VS-VC method over the BLM's VRM method in analyzing visuals impacts from DPV #2. | X | | 20. The Service disagrees with this comment. A Refuge Manager is required and authorized to exercise "sound professional judgment" in preparing a CD. CDs are inherently complex and require the Refuge Managers to consider their field experiences and knowledge of a Refuge's resources, particularly its biological resources, and make conclusions that are consistent with principles of sound fish and wildlife management and administration, available scientific information, and applicable laws. 65 Fed. Reg. 62489, §2.11(A). In light of this and pursuant statute, regulation and Service policy, the Refuge Manager has appropriately relied upon his 19 years of experience with the Service, the knowledge of his staff, administrative record documents applicable to this issue, personal knowledge of the Refuge and its resources, knowledge of the NWRS, and all other available resources to prepare this CD. 21. Based on a review of documents provided by SCE (amendments to the Arizona Desert Wilderness Act of 1990), the Service and its attorneys believe that it was Congress' intent to exclude 100 acres from wilderness designation at the Refuge to avoid conflicts with wilderness. We do not believe it was Congress' express intent to authorize DPV #2 through these amendments. 22. At CNWR the Refuge Manager determined that the addition of 150' width to an existing 100' wide and half-mile long ROW, combined with the installation of two 500KV single-circuit steel towers, was compatible with the NWRS mission. Given the differences in scope of the proposed uses between the Refuge and CNWR and differences in flora, fauna, landscape, and uses, the Refuge cannot reasonably compare the two CDs. 23. The Refuge Manager is familiar with the VRM methodology adopted by the BLM and satisfied with its application in the FEIS to analyze and determine visual resource impacts within the Refuge segment of DPV #2. In addition, the use of the VRM methodology was the decision of BLM/CPUC, not the Service. |

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## ISSUE MATRIX FOR DRAFT COMPATIBILITY DETERMINATION
## SOUTHERN CALIFORNIA EDISON-DEVERS PALO VERDE #2

| # | NAME | ADDRESS or EMAIL | Date RCVD | ISSUES | N | P | AGENCY RESPONSE |
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| 36 | Sandy Bahr | Sierra Club-Grand Canyon Chapter | 12/26/06 | 1. Project is incompatible with the Refuge's mission. 2. A new powerline is not appropriate use pursuant to the Appropriate Uses Policy. 3. Negative impacts to native plants. 4. Introduction of non-native plants. 5. Negative impacts on visual values of the Refuge. 6. Negative impacts on birds. 7. Negative impacts on wildlife habitat. 8. Project will diminish recreational value of the Refuge. 9. Noise of additional powerline is incompatible. | | X | Comments consistent with the draft CD. No further action required. |
| 37 | Carey Meister | Yuma Audubon Society | 12/26/06 | Refer to # 35 above. | | X | Comments consistent with the draft CD. No further action required. |
| 38 | Kevin Gaither-Banchoff | Arizona Wilderness Coalition | 12/26/06 | Refer to # 35 above. | | X | Comments consistent with the draft CD. No further action required. |
| 39 | Justin Augustine | Center for Biological Diversity | 12/26/06 | Refer to # 35 above. | | X | Comments consistent with the draft CD. No further action required. |
| 40 | Bob Witzeman | Maricopa Audubon Society | 12/26/06 | Refer to # 35 above. | | X | Comments consistent with the draft CD. No further action required. |
| 41 | Noah Matson | Defenders of Wildlife | 12/26/06 | Refer to # 35 above. | | X | Comments consistent with the draft CD. No further action required. |
| 42 | Daniel R. Patterson | Public Employees for Environmental Responsibility (PEER) | 12/26/06 | Refer to # 35 above. | | X | Comments consistent with the draft CD. No further action required. |
| 43 | Kim Crumbo | Grand Canyon Wildlands Council | 12/26/06 | Refer to # 35 above. | | X | Comments consistent with the draft CD. No further action required. |

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| # | NAME | ADDRESS or EMAIL | Date RCVD | ISSUES | N | P | AGENCY RESPONSE |
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| 44 | Ron Kearns | krlsss1@yahoo.com | 12/26/06 | 1. "The SCE powerline must not be allowed." | | X | Comments consistent with the draft CD. No further action required. |
| 45 | Kathryn Dankwort | 8121 N. 8th Ave<br>Phoenix, AZ 85021-5634<br>rdankwort@cox.net | 12/27/06 | 1. "...a proposed second transmission line through the Refuge, bringing further havoc to wildlife of all kinds." | | X | Comments consistent with the draft CD. No further action required. |
| 46 | Raymond Varney | rnvarney@intergate.com | 12/28/06 | 1. "I heartily concur with your assessment and judgment of non-compatibility. 2. "...one of BLM's purposes is to provide for the nation's energy needs. The powerline fits better within their objectives than it does on a NWR." | | X | Comments consistent with the draft CD. No further action required. |
| 47 | Jon Findley | jonaz@learnweb.com | 12/29/06 | 1. Destruction of pristine desert landscape. 2. Irreparable and unmitigable visual impacts. 3. Project would diminish recreational values of the Refuge. | | X | Comments consistent with the draft CD. No further action required. |
| 48 | Larry J. Thoney | PO Box 31<br>Wickenburg, AZ 85390 | 1/8/07 | 1. Negative impacts to bighorn sheep. 2. Incompatible with the Refuge's mission. | | X | Comments consistent with the draft CD. No further action required. |
| 49 | Bill Bowling | bbowling2@cox.net | 1/4/07 | 1. Negative impacts on birds. | | X | Comments consistent with the draft CD. No further action required. |

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U.S. Fish and Wildlife Service
Statement regarding the compatibility of a transmission line across Kofa National Wildlife Refuge
March 8, 2007

The Kofa National Wildlife Refuge in southern Arizona received an application for a right-of-way permit from Southern California Edison to construct the Devers Palo Verde #2 500 kilovolt electric transmission line through approximately 24 miles of the refuge. As proposed, there would be a total of 85, four-legged lattice towers with a 130-foot wide right-of-way installed in the corridor across refuge lands. The line is part of a new 230 mile line. The application was received in November 2005. In December 2006 the Service published a draft compatibility determination for public comment. On Monday, March 5, 2007, the Service informed the company that their application was found to be incompatible with the mission of the National Wildlife Refuge System and the purposes for which Kofa National Wildlife Refuge was established. The company can appeal the Service's decision.

Kofa was established in 1939 for the conservation of natural wildlife resources. More than three-fourths of the 665,400 acre refuge is comprised of wilderness that is managed consistent with the Arizona Desert Wilderness Act. The project, as proposed, would destroy nearly 100 acres of Sonoran Desert scrub and fragile desert soils. This loss alone affects 13 plants protected under the Arizona Native Plant Law. There are at least ten rare species that occur within that affected area. Desert bighorn sheep breed and have their lambs in an area that would be affected. In past years, desert bighorn sheep from Kofa have been used to re-establish populations in Arizona, Colorado and New Mexico as part of an exchange program. At least five migratory bird species could be negatively impacted with destroyed nesting or foraging habitat. Potential collisions with towers could result in their death.

Kofa is a special place that attracts visitors locally, nationally and internationally. The negative impacts to the environment are both direct and indirect. The view of 85 towers and associated conductors degrades the landscape for wildlife-dependent recreation including observation, photography, and hunting. The associated visitation has a positive economic impact in the community.

The full analysis is available on the web at http://www.fws.gov/southwest/refuges/arizona/kofa.html.